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A

SYSTEMATIC ARRANGEMENT OF BRITISH PLANTS;

BY

W. WITHERING, M.D.

Corrected and Condensed;

PRECEDED BY

AN INTRODUCTION TO THE STUDY OF BOTANY,

ACCOMPANIED WITH FIGURES:

By W. MACGILLIVRAY, A.M.

MEMBER OF THE WERNERIAN NATURAL HISTORY SOCIETY, &c.

LONDON:

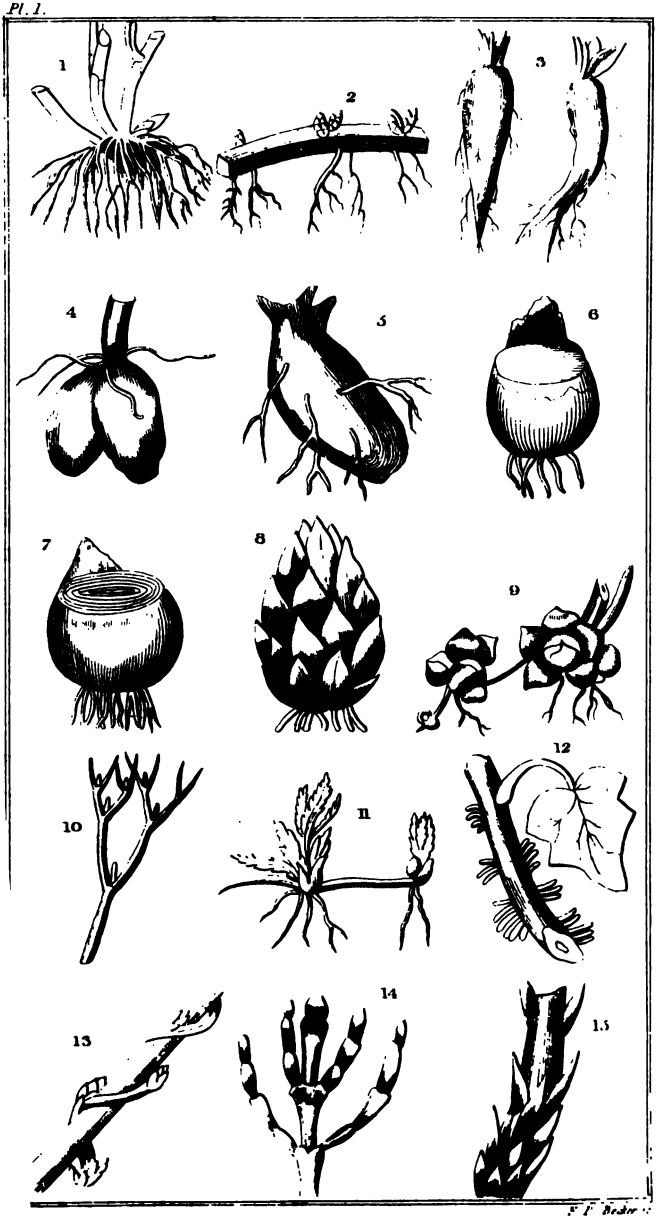
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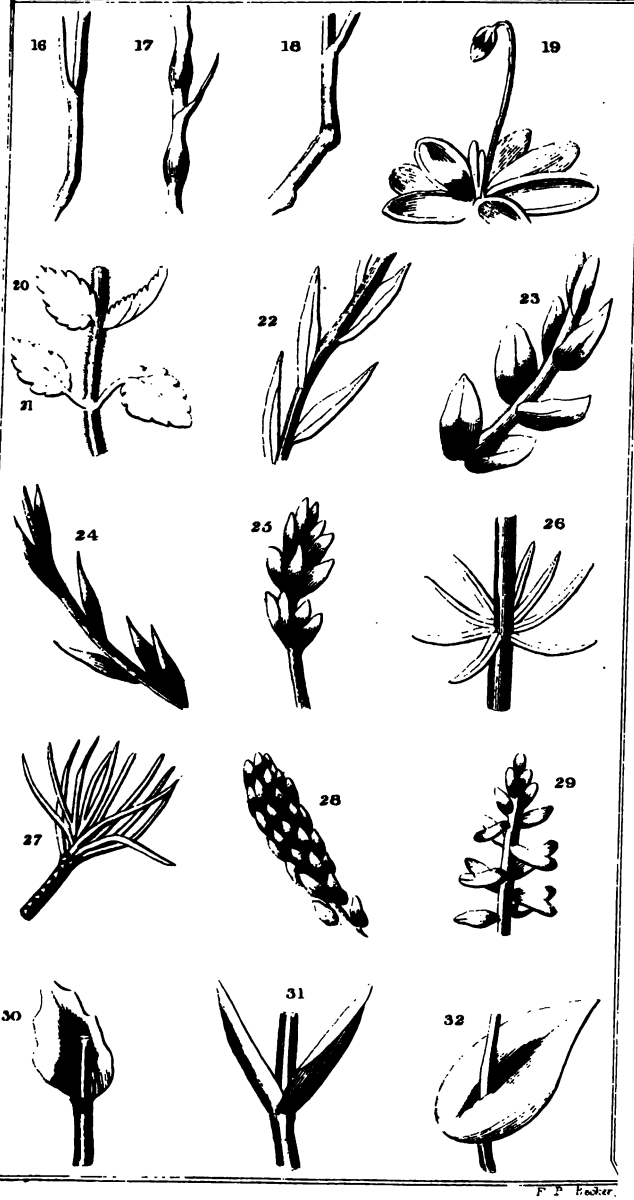
AND MARTIN KEENE & SON, DUBLIN.

1830.

Pl. 1.



Pl. 2.



F. P. Hooker.


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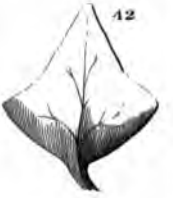

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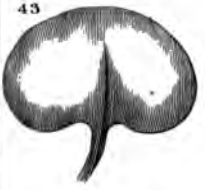

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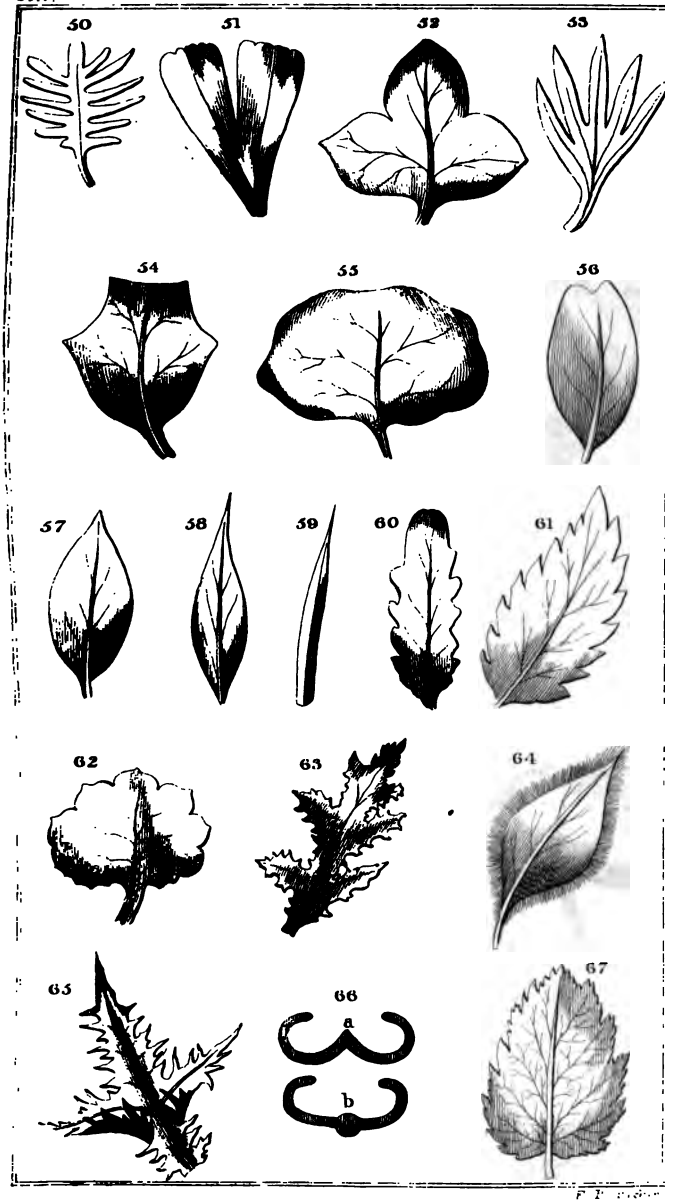

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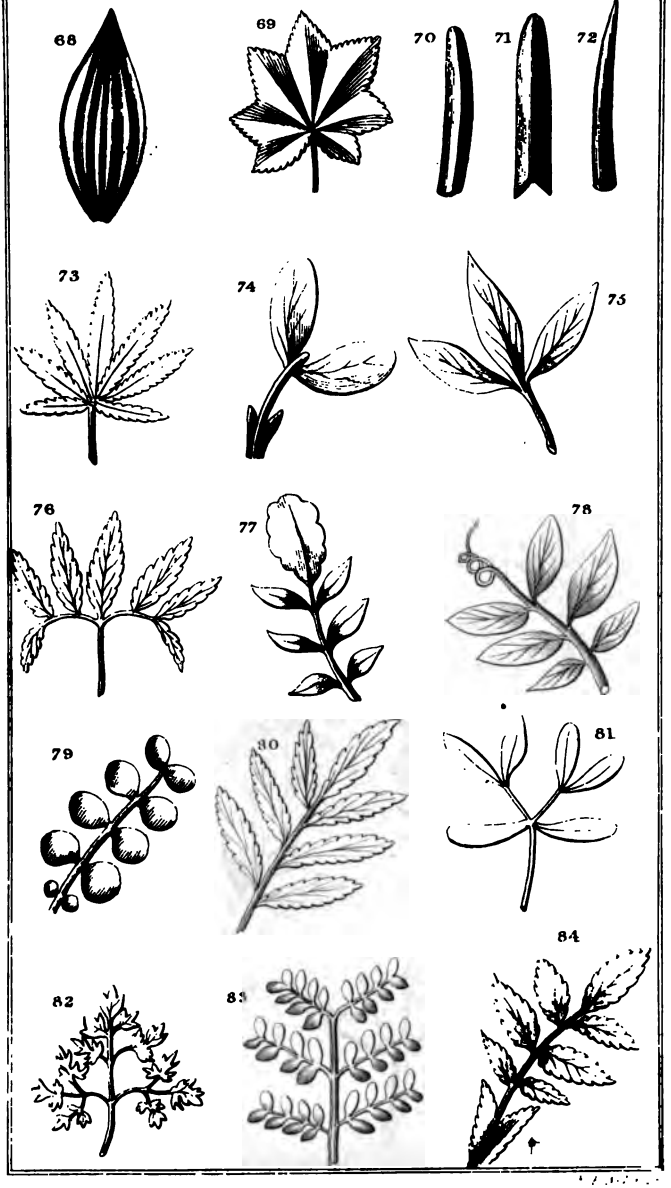

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Pl. 4.



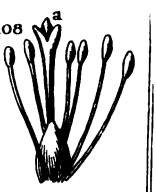

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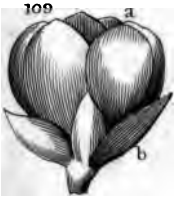

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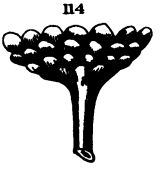

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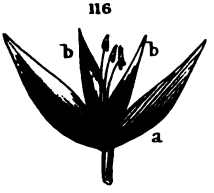

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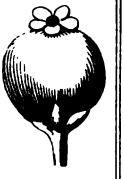

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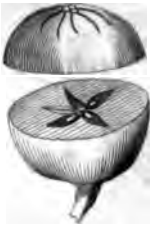

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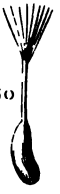

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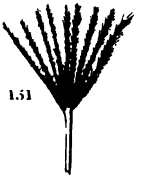

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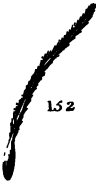

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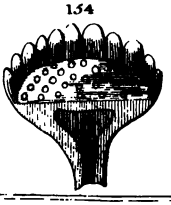

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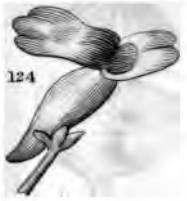

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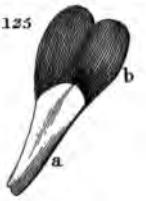

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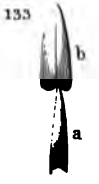

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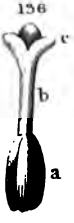

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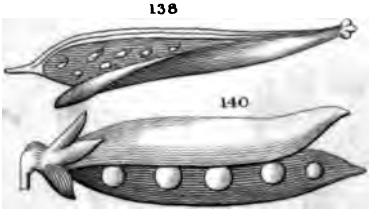

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the late Sir James E. Smith, of Dr. Hooker, Lightfoot, and other English botanists, have tended to diffuse a taste for botanical pursuits. Their works at least could not be overlooked. Original descriptions have occasionally been furnished, and various particulars relative to the uses of plants added, by the compiler, who is sorry that he has not here to record any assistance derived from his botanical friends, although to one gentleman he is indebted for many valuable suggestions respecting the general plan of the work. Excepting the Ferns, the Cryptogamic Plants have been omitted, as too difficult for the Student, until he has rendered the more attractive species familiar. Several species generally admitted as native, but upon insufficient evidence, have also been omitted. Although the compiler cannot boast of so critical a knowledge of Botany as of some other departments of Natural History, he is yet sufficiently aware of the difficulties which the student of that science has to encounter, and has been deeply impressed with the importance of precise characters and pure language in every science. It is therefore confidently hoped that the work will prove useful; and should the author have contributed in any considerable degree to facilitate the progress of beginners in the delightful study of Botany, he will be grateful to Him who has permitted such a use of the faculties bestowed upon him. It were alike unnecessary and useless to say any thing here in recommendation of the science of plants:—unnecessary, because its fascinations have been extensively felt, and useless because they who may peruse this work, if they do not love nature for her own sake, will hardly be persuaded to love her for any thing that another might say in her praise.

W. MACGILLIVRAY.

Edinburgh, June 9, 1830.

INTRODUCTION

TO THE

STUDY OF BOTANY.

In commencing the study of practical Botany, it is necessary in the first place to acquire some knowledge of the different parts or organs of which plants are composed. Different plants are very differently constituted in this respect; but the organs which generally present themselves in plants of ordinary occurrence are the Root, the Stem, the Leaves, the Appendages, the Flower-stalks, the Flowers, and the Fruit.

OF THE ROOT AND ITS DIFFERENT KINDS.

The *Root* is that part of the plant which is commonly immersed in the ground. It consists of two parts, the *Body* of the root, and the *Radicles* or *Fibres*. The latter are small branches or thread-like organs which come off from the body, and are the only essential parts of the root. The uses of the root are to fix the plant in a particular place, and to derive nourishment for it. The following are the principal varieties of the root.

A *Fibrous Root* (Fig. 1.) consists entirely of fibres or radicles, which may be undivided or branched.

A *Creeping Root* (Fig. 2.) is a kind of subterranean stem, running horizontally, and throwing out fibres at intervals.

A *Tapering* or *Spindle-shaped Root* (Fig. 3.) is a thickened, fleshy root, tapering downwards, and sending out small fibres.

A *Tuberous* or *Knobbed Root* (Fig. 4.) consists of one or more fleshy knobs, varying in form.

An *Abrupt Root* (Fig. 5.) is a root of the same nature as the last two, having an elongated form, and looking as if it had been bitten off at the lower end.

A *Bulbous Root* is a root which, superadded to numerous fibres, has an enlarged, more or less spherical part, which may be *solid* (Fig. 6.); *coated*, composed of concentric layers (Fig. 7.); or *scaly*, consisting of thick scales. (Fib. 8.)

A *Granulated Root* (Fig. 9.) consists of numerous small bulbs or scales strung together.

The duration of the root determines that of the plant. When the root lasts only one year, the plant is said to be *Annual*. When it continues two years, the plant is *Biennial;* when more than two years, *Perennial*.

OF THE STEM.

The *Stem* is that part of the plant which, rising above ground, supports the leaves and flowers.

Some plants have no stem, and are therefore denominated *stemless*.

Others have a soft stem, which, after the fruit is perfected, decays, and is named *herbaceous*.

Others again have a hard *woody* stem. Plants possessed of this kind of stem are, when large, called *Trees*, when small *Shrubs*.

In the woody stem there are distinguished the following parts: the *epidermis*, or external thin filmy covering; the *cellular integument*, a thin layer under the epidermis; the *bark*, generally of a brown or grey colour; the *inner bark*, a whitish, soft, and very flexible part, lying under the bark; the *alburnum*, a layer of young wood next to the inner bark; the *wood*, generally formed into layers, one of which is produced annually; and lastly the *pith*, a white, cellular, spongy substance, occupying the centre of the stem.

Herbaceous stems have also an epidermis, cellular substance, fibrous and vascular tissue, and sometimes internal pith.

The stem of a tree is called its *Trunk;* the divisions of the stem are the *Branches* and *Twigs*.

Stems in general may be *simple*, having no divisions, or *branched*. Of the latter there are several kinds.

A *Forked* or *Dichotomous Stem* (Fig. 10.) is when it is regularly and repeatedly divided into two, and a flower springs from each fork.

A *Panicled Stem* is when branches come off irregularly,

and are themselves irregularly divided, the ultimate divisions bearing flowers.

Two-ranked, when the branches spread in two opposite directions.

Four-ranked, when they spread in four directions.

With respect to its general direction, the Stem is

Erect or *Upright*, when it rises perpendicularly.

Ascending or *Oblique*, having an oblique direction.

Procumbent, lying on the ground.

Creeping (Fig. 11.), running along the ground, and sending down roots from space to space.

Prostrate, lying remarkably flat.

Clinging (Fig. 12.), holding fast to some other body for support, by means of fibres.

Climbing, ascending on other bodies, either by fibres or by tendrils.

Twining round other plants or bodies. (Fig. 13.) Some stems twine from left to right, others from right to left.

Straight, proceeding in a direct course.

Flexuous or *Zig-zag*, forming angles from right to left, and the reverse.

With respect to form, the Stem is

Round or *Cylindrical*, when a transverse section is circular, or nearly so.

Semicylindrical, when flat on one side and round on the other.

Compressed, when more or less flat on both sides.

Two-edged, when more or less compressed, with two opposite sharp edges.

Three-edged, or triangular, or three-cornered.

Four-edged, or four-cornered.

Five-cornered. When the number of corners exceeds five, the stem is described as being *angular* or *many-cornered.*

Winged, when the edges or corners are extended into thin leafy borders.

Jointed or *articulated* (Fig. 14.), when formed into distinct parts united by portions of smaller diameter.

With respect to its surface, it is

Smooth, destitute of all kinds of hairiness.

Even, destitute of all kinds of inequality.

Polished or *Shining*, smooth and reflecting light.

Viscid or *Clammy*, covered with a glutinous juice.

Scaly, covered with scales. (Fig. 15.)

Warty, covered with small hard protuberances.

Papillous, covered with small soft protuberances.

Rough, covered with inequalities of any kind, as opposed to even.

Prickly, covered with prickles.

Bristly, covered with stiff hairs.

Shaggy, covered with very long, soft, generally white hairs.

Woolly, covered with long, soft, interwoven, or tortuous hairs.

Hairy, covered with long, soft, straight hairs.

Downy, covered with soft, fine hairs.

Hoary, covered with close, white hairs, extremely fine.

Glaucous, covered with a pale greenish-blue mealiness.

Striated or *Streaked*, marked with parallel longitudinal lines.

Furrowed or *Grooved*, marked with larger alternately prominent and depressed lines. When the lines become wider, the stem is cornered or angular.

Internally the Stem may be

Solid, uniform throughout.

Hollow, having a large internal cavity.

Pithy, having the central part filled with pith.

There is a kind of stem, peculiar to grasses and other allied plants, which is named the *Straw* or *Culm*. It presents the following varieties:

Jointed, with cylindrical hollow parts, united by a contracted solid part. (Fig. 16.)

Knotted, when the joints are enlarged. (Fig. 17.)

Geniculate or *Kneed*, when the joints are bent like a knee. (Fig. 18.)

It may be solid, round, triangular, smooth, rough, hairy, or downy.

A variety of the Stem is the *Stalk*, *Flower-stalk*, or *Scape*, (Fig. 19.) which springs from the root, and supports the flowers, but not the leaves. It may be

Simple or undivided, and bearing a single flower.

Subdivided, and bearing several flowers.

Scaly, covered with scales.

Naked, without scales.

As to surface, &c., it is named like the Stem.

OF THE LEAVES.

The Leaves are organs of an expanded form, almost always of a green colour, internally vascular and more or less pulpy. Many plants are destitute of leaves, and are therefore termed *leafless*. When a leaf has no stalk, it is said to be *sessile* or *sitting*. (Fig. 20.) When it is elevated on a stalk, it is said to be *stalked*. (Fig. 21.)

The *Leaf-stalk* or *Petiole* is either simple, that is, undivided; or *compound*, that is, variously branched or divided. It is commonly channelled on the upper side, and frequently enlarged at the base.

With respect to situation and position, leaves are

Radical or *Root-leaves*, when they arise from the root. (Fig. 19.)

Cauline or *Stem-leaves*, when they grow on the stem. (Fig. 23, 24.)

Alternate (Fig. 22.), when they come off from the stem one by one in different directions.

Opposite (Fig. 23.), when they grow opposite to each other.

Scattered (Fig. 24.), irregularly distributed.

Clustered (Fig. 25.), crowded together.

Remote, when widely separated.

They may grow two together, in threes, four together, &c.

Whorled (Fig. 26.), when several leaves grow in a circle round the stem.

Fasciculate or *Tufted* (Fig. 27.), when several leaves spring from one point.

Imbricated (Fig. 28.), when one leaf lies over another, like the tiles or slates on the roof of a house.

Decussated (Fig. 29.), in pairs alternately crossing each other.

Two-ranked, spreading in two directions.

Unilateral, all inclining one way.

With respect to direction, they are

Close-pressed to the stem.

Erect or *Upright*, forming a very acute angle with the stem.

Vertical, standing quite erect.

Spreading, forming a moderately acute angle with the stem.

Horizontal, standing off at right angles.

Reclinate, inclining downwards.

Reflected, bent backwards.

Inflected, bent inwards.

Depressed, root-leaves pressed close to the ground.

Floating, leaves lying flat on the surface of the water.

Immersed or *submersed*, under water.

Emersed, standing out of the water.

With respect to insertion, leaves are

Embracing (Fig. 30.), when they clasp the stem with their base.

Connate or growing together (Fig. 31.), united at their base.

Perfoliate (Fig. 32.), when the stem runs through the leaf.

Sheathing, investing the stem or each other with a sheath.

Equitant or *Riding* (Fig. 33.), disposed in two opposite rows, and embracing each other at the base.

Decurrent (Fig. 34.), running down the stem or branch so as to form a leafy border.

Peltate or *Shield-shaped* (Fig. 35.), when the stalk is inserted into the middle of the leaf.

Leaves are Simple or Compound. A *Simple Leaf* is one which consists of a single piece, whether sessile or stalked. A *Compound Leaf* is one which consists of several pieces connected by insertion into a common footstalk. In simple leaves there are to be considered the general form, the terminations, the margins, the surface, the substance, and the duration.

With respect to form, Simple Leaves are

Orbicular, when the length and breadth are equal.

Roundish, when the length and breadth are nearly equal.

Egg-shaped or *Ovate* (Fig. 36.), longer than broad, the base broader than the end.

Inversely egg-shaped, longer than broad, the end broader than than the base.

Oval or *Elliptical* (Fig. 37.), the length greater than the breadth, but both ends alike rounded.

Oblong, the length three or four times greater than the breadth.

Spatulate (Fig. 38.), circular at the end, and tapering towards the base.

Wedge-shaped (Fig. 39.), broad at the end, and tapering towards the base.

Rhombic or *Diamond-shaped*, approaching to a square.

Lance-shaped, *Spear-shaped*, or *Lanceolate* (Fig. 40.), oblong and narrow, tapering towards each end.

Linear (Fig. 41.), very narrow, with the edges parallel.

Needle-shaped, linear and ever-green.

Triangular (Fig. 42.), flat with three angles.

Quadrangular, with four angles.

Quinquangular, with five angles.

Kidney-shaped (Fig. 43.), roundish, with the base hollowed out.

Heart-shaped (Fig. 44.), egg-shaped with the base hollowed out.

Arrow-shaped (Fig. 45.), triangular, hollowed out at the base.

Halbert-shaped (Fig. 46.), triangular, hollowed out at the base and sides, with a projecting part on each side.

Pinnatifid (Fig. 47.), cut transversely into several oblong segments.

Lyre-shaped (Fig. 48.), cut transversely into several oblong segments, with a terminal segment rounded and larger than the others.

Runcinate (Fig. 49.), a pinnatifid leaf with the segments pointed and directed backwards.

Pectinate or *comb-like* (Fig. 50.), pinnatifid, with the segments very narrow.

Cleft (Fig. 51.), when the margins of the segments are straight.

Lobed (Fig. 52.), when the margins of the segments are rounded.

Palmated (Fig. 53.), when there are several oblong segments, extending to the middle of the leaf, leaving an entire space.

Undivided, when there are no segments, as in Fig. 36, 37.

With respect to their terminations, simple leaves are

Blunt or *Obtuse* (Fig. 36.), when rounded at the end.

Abrupt (Fig. 54.), when the extremity seems as if cut off by a transverse line.

Retuse (Fig. 55.), ending in a broad shallow notch.

Notched (Fig. 56.), ending with a small notch.

Acute or *sharp* (Fig. 57.), ending in a point.

Acuminate or *Taper-pointed* (Fig. 58.), having a long tapering point.

Bristle-pointed (Fig. 59.), when terminated by a bristly point.

With respect to their margins, they are

Entire (Fig. 36, 43.), when destitute of teeth or notches of any kind on the edges.

Toothed (Fig. 60.), having small protuberances on the margin, which are named teeth.

Serrated (Fig. 61.), when the teeth are sharp, close, and point in one direction.

Finely serrated, when the teeth are minute.

Crenate or *Notched* (Fig. 62.), when the teeth are broad, and not directed towards either end.

Gnawed or *Jagged* (Fig. 63.), irregularly notched or cut.

Undulated or *Waved* (Fig. 55.), presenting a waved margin.

Fringed (Fig. 64.), bordered with soft hairs.

Prickly or *Spinous* at the margin. (Fig. 65.)

Revolute or rolled back at the margin. (Fig. 66, *a*.)

Involute or rolled inwards at the margin. (Fig. 66, *b*.)

With respect to *surface*, leaves present numerous varieties, the principal of which have already been pointed out in speaking of the surface. Thus, they may be smooth, hairy, downy, &c.

Leaves, however, may also be

Veined (Fig. 67.), when the vessels are more or less prominent, and are subdivided so as to form a net-work.

Ribbed (Fig. 68.), when the vessels extend in undivided lines.

Wrinkled, when the veins are tighter than the substance between them, so that the latter becomes puckered.

Plaited (Fig. 69.), when a leaf is folded, so as to present alternately projecting and retiring angles.

Curled, when the margin is greatly more expanded than the disk, and the leaf thus becomes folded or curled.

Naked, destitute of all kinds of hairiness.

With respect to substance, simple leaves are

Membranous, when very thin and easily torn.

Leathery, when thin but very tough.

Fleshy, when more or less thick and juicy.

Cartilaginous, when more or less thick and tough.

Flat, opposed to the following:

Cylindrical or *round*; *Semicylindrical*, flat on one side, and round on the other.

Compressed, when thick and flattened laterally.

Depressed, flattened vertically.

Channelled (Fig. 70.), having a longitudinal groove.

Keeled (Fig. 71.), having a longitudinal prominence on the back.

Sword-shaped, perpendicular, two edged, and slightly convex on both surfaces.

Awl-shaped (Fig. 72.), long, cylindrical at the base, and tapering to a point.

Hair-shaped or *Bristle-shaped*, the same, but more slender.

Hollow or *tubular*, more or less cylindrical and empty.

Jointed or *articulate*, divided into cavities by transverse partitions.

Two-edged, *Three-sided* or *Three-edged*, *Four-sided*, &c.

With respect to duration, Leaves are generally

Deciduous, or fall off every year; but they may also be

Permanent or *Evergreen*, when they remain unaltered during winter.

Compound Leaves are named as follows:

Compound Leaves are such as present a greater or less number of distinct parts, connected by a common stalk. The distinct parts are named *Leaflets*, and the divisions of the common stalk are named *Partial stalks*. The following are the principal kinds of Compound Leaves.

Fingered or *Digitate* (Fig. 73.), when several leaflets rest upon the summit of a common stalk.

Binate (Fig. 74.), when two leaflets rest upon a common stalk.

Ternate (Fig 75.), when three leaflets rest upon a common stalk.

Quinate, when the leaflets are five.

Pedate (Fig. 76.), a ternate leaf, having its lateral leaflets divided into several others.

Pinnate or *Winged*, when several leaflets proceed laterally from a common stalk. Of this there are several varieties:

Pinnate with an odd *terminal leaflet*. (Fig. 77, 80, 84.)

Pinnate with a *tendril* (Fig. 78.), when a tendril terminates the stalk.

Abruptly Pinnate (Fig. 79.), without a terminal leaflet or tendril.

Alternately Pinnate (Fig. 80.), when the leaflets are alternate.

Oppositely Pinnate (Fig. 77, 78, 79.), when the leaflets are opposite.

Interruptedly Pinnate, when there are smaller leaflets between the larger.

Jointedly Pinnate, with joints in the stalk.

Decurrently Pinnate, when the leaflets run down the stalk.

Pinnate in a lyrate manner (Fig. 77.), when the terminal leaflet is largest.

Conjugate, Yolked or *Paired*, when there are only two pinnæ or leaflets.

Bigeminate, twice paired.

Trigeminate (Fig. 81.), thrice paired.

Biternate, twice ternate.

Triternate (Fig. 82.), thrice ternate.

Bipinnate, twice pinnate.

Tripinnate (Fig. 83.), thrice pinnate.

Without reference to the mode of division, the degrees in which leaves are compounded, are expressed by the following terms.

Compound, as in Fig. 73, 74, 75, 76.

Twice compound.

Thrice Compound, as in Fig. 82, 83.

OF THE APPENDAGES.

The Appendages are organs or parts not included under the other principal divisions. Several kinds are enumerated. Of these the principal are the following.

1. The *Stipule*, or appendage to the leaf (Fig. 84.*), these organs are generally of a leafy nature, and are named in the same manner as the leaves themselves, being egg-shaped, arrow-shaped, serrated, obtuse, &c. They are commonly sessile and in pairs. The stipule of grasses is frequently termed the *ligule* or strap.

2. The *Bractea* or *Floral Leaf* (Fig. 85, *a*. 86, *a*. 89, *a*, *b*.), a leafy appendage to the flower or its stalk. It varies greatly in form, and is named like the leaves, which it frequently resembles in colour and texture, although it is often much thinner and variously coloured.

3. The *Sheath* (Fig. 87.) is a membranous covering, which incloses the flower in its earlier stages, afterwards bursts longitudinally, and is ultimately at a greater or less distance from the flower.

4. The *Involucre* (Fig. 88.) is a kind of bractea, consisting of several leaves, placed at a distance from the flower. When at the base of a common or general umbel, it is called the *Com-*

mon *Involucre* (Fig. 89, *a.*); and when at the base of a partial umbel, the *Partial Involucre.* (Fig. 89, *b.*)

5. The *Tendril* (Fig. 90, 78.), a thread-like organ which serves to attach plants to some support. It may be simple or divided.

6. *Glands*, small round bodies which secrete fluids.

7. The *Thorn* or *Spine* (Fig. 91.), an acute appendage which arises from the wood. It may be *terminal*, situated at the point of a branch; *axillar* at the origin of the branch; *simple* or *branched.*

8. The *Prickle* (Fig. 92.), a production which arises from the bark, having no connexion with the wood.

9. *Hairs*, slender bodies of various degrees of fineness, by which the surfaces of plants are covered. They are generally simple, sometimes branched.

OF THE FLOWER-STALKS, AND INFLORESCENCE.

The *Flower-stalk* or *Peduncle* is the more or less slender body by which the flower is connected with the stem or other parts of the plant. When it arises from the root, it is called a *Scape* (Fig. 19.), as already mentioned. When it springs from the stem, it is

Lateral, when situated on the side.

Terminal, when it terminates a stem or branch.

Axillar, when it grows between a leaf and the stem, or between a branch and the stem.

Opposite to a leaf, or to another flower-stalk.

Solitary, when there is only one in the same place.

Clustered, when several grow together.

Scattered, irregularly distributed.

A Flower-stalk may be one-, two-, three-, or many-flowered.

When it is branched or otherwise divided, the principal stalk is called the *General* flower-stalk, the ultimate divisions are *Partial* flower-stalks.

When the flowers are destitute of stalks, they are called *Sessile.*

The *Inflorescence* is a term used to denote the particular way in which the flower-stalk is divided. The following kinds are described.

1. The *Whorl* or *Verticil* (Fig. 93.) consists of several flowers which encircle the stem, in the same manner as whorled leaves

(Fig. 26.), whether they be furnished with stalks, or, as is more commonly the case, sessile.

2. The *Spike* (Fig. 94, 95.) is that kind of inflorescence in which numerous flowers are ranged along a common stalk, without any partial stalks, or only very short ones. The spike may be lateral, axillar, or terminal, according to its position. It is also described, according to its general form, as being egg-shaped, cylindrical, &c. When the flowers all lean to one side, it is called *one-rowed* or *unilateral*, as in Fig. 94. When they are arranged along two sides, it is called *distichous* or *two-rowed*. When subdivided into lesser spikes, it is said to be *compound*.

The *Spikelet* (Fig. 96.) is a term applied peculiarly to grasses which have many flowers arranged on a stalk, within a common calyx.

3. The *Cluster* or *Raceme* (Fig. 97, 98.) consists of numerous flowers, each on a stalk of its own, arranged along a common stalk. The principal difference between the raceme and the spike is, that in the latter the flowers are nearly or entirely sessile and close, while in the former they are more or less stalked and somewhat distant from each other. The cluster may be one-rowed, simple, compound, erect, pendulous, &c.

4. The *Corymb* (Fig. 99.) is an erect cluster, the partial stalks of which are gradually longer as they stand lower on the common stalk, so that the flowers are nearly level.

5. The *Bundle* or *Fasciculus* (Fig. 100.) consists of several flower-stalks of equal height, arising at the end of the stem, variously inserted and subdivided, and forming a close bundle.

6. The *Head* (Fig. 101.) bears the flowers sessile in a globular form.

7. The *Umbel* consists of a number of flower-stalks of nearly equal length, rising from one common centre or point, their summits forming a level or convex surface. When the stalks are simple and single-flowered, it is called a *Simple Umbel*. (Fig. 102.) When the summit of each stalk sends out a number of smaller stalks, similarly arranged, it is called a *Compound Umbel* (Fig. 89.); in which case the first stalks are collectively called the *General* umbel, and the smaller sets the *Partial* umbels.

8. The *Cyme* (Fig. 103.) is that kind of inflorescence which has the general appearance of an umbel, but in which the principal stalks only spring from a common centre, while the others are variously and alternately subdivided.

9. The *Panicle* (Fig. 104.) bears the flowers in a kind of loose subdivided cluster. It presents the following varieties:

Loose or *Lax*, when the stalks are distant.

Close, when they are placed near each other.

Crowded, when very close.

Spreading, when the branches spread out on all sides.

10. The *Thyrsus* or *Bunch*, is a close panicle, having an oval form.

11. The *Catkin* (Fig. 105.) is a long simple stalk, thickly covered with scales, under which are the flowers, or their essential parts.

OF THE FLOWERS AND FRUIT.

The Flower and Fruit are generally termed the *Fructification*, which Linnæus defines "a temporary part of vegetables, destined for the re-production of the species, terminating the old individual, and beginning the new." There are distinguished seven parts of fructification, some of which however are not of universal occurrence. These seven parts are the Calyx, the Corolla, the Nectary, the Stamens, the Pistils, the Seed-vessel, the Seed, and the Receptacle. The seed, the pistil, and the stamen, are the most essential parts. The receptacle is always present; but the corolla and the calyx are frequently wanting.

Fig. 106 shews four seeds in the bottom of a calyx.

Fig. 107 shews a seed-vessel and a calyx.

Fig. 108 shews a style, *a*, with six stamens.

Fig. 109 shews a corolla, *a*, and a calyx, *b*.

The Receptacle is the point of union of these parts.

The Nectary is various, and will be afterwards shewn.

I. *Of the Calyx.*

The *Calyx* or *Flower-cup* forms the outer part or covering of the flower. It may be of one or of several pieces, and is generally of a green colour. It is sometimes wanting, in which case the flower is said to be naked. Several varieties of the calyx are distinguished.

1. The *Perianth* or Calyx properly so called (Fig. 109, *b*, 110, *a*) is contiguous to the corolla or other internal parts of the flower, closely investing them. The following varieties may be mentioned.

A *simple Perianth*, when there is only one, as is generally the case.

Double (Fig. 111.), when there are two.

One-leaved or *of one leaf* (Fig. 112.), when it consists of a single piece, which however may be variously divided; in which case the divisions are called *segments*, and when small *teeth*.

Two-, three-, four-, or five-leaved, or many-leaved, when it consists of so many distinct pieces or leaves.

Entire, when a one-leaved perianth has no divisions.

Tubular, when cylindrical towards the base.

Spreading, when the leaves or segments stand out horizontally.

Reflected, when they are bent back.

Erect, when they stand upright.

Permanent or *Persistent*, when it remains till the fruit is ripe.

Deciduous, when it falls off before the fruit is ripe.

Caducous, or *Fugacious*, when it falls off before the corolla.

Coloured, when of any other colour than green.

2. The *Common Calyx* is one which contains a great number of flowers, which are placed so closely together that the whole appears like a single flower. This kind of calyx generally consists of several pieces or leaves. It is

Simple, when the flowers are surrounded by a single row of leaves.

Double, when the flowers are surrounded by two rows of leaves.

Equal, when in a simple calyx the leaves are all of equal length.

Imbricated (Fig. 113, 114.), when the common calyx consists of imbricated leaves or scales.

Spherical, Globose, or *Globular* (Fig. 113.), when it has the form of a sphere.

Hemispherical (Fig. 114.), when round below and flat above.

Egg-shaped, when of the form of an egg.

Cylindrical, when long and round.

Flat, when the scales are spread out.

The scales or leaves of the common calyx are described in the same manner as leaves. Thus they may be egg-shaped, lance-shaped, fringed, thorny or spinous, &c.

3. The *Scales* of the Catkin (Fig. 105.) are considered as calyxes. (Fig. 115.)

4. The *Outer Husk* or *Chaff-scale* (Fig. 116.) is the peculiar calyx of grasses and plants allied to them. It may be *single*, of one piece or scale; of two, three, or more pieces. It may be egg-shaped, lance-shaped, keeled, acute, &c.

II. *Of the Corolla.*

The *Corolla* is the envelope of coloured and delicate leaves, always internal with respect to the calyx, and surrounding the stamens and other essential parts. The leaves or pieces of which it is composed are called *Petals*. When it consists of one piece only, it is called *Monopetalous*, or in common language, a corolla of one petal. Corollas are seen in Fig. 87, *a*, 109, *a*, 110, *b*.

The Corolla of grasses consists of one or two pieces, called *husks* (Fig. 116, *b. b.*), resembling the chaff-scales. There is frequently appended to them a hard elongated body called the awn (Fig. 96.), which is often twisted.

The *Monopetalous Corolla* (Fig. 117.) consists of two parts: the *tube* (*a.*), the narrow part generally inclosed in the calyx; and the *limb* (*b.*), the expanded part. The following varieties of this kind of corolla may be mentioned:

Strap-shaped, narrow and flat.

Tubular (Fig. 118.), consisting of a single piece, hollow and of nearly equal thickness; this term, however, is used with great latitude, and, in the compound flowers, applies to corrollas of various forms.

Spherical or *Globose* (Fig. 119.), narrow above and below and enlarged in the middle.

Bell-shaped (Fig. 120.), having the form of a bell, with the margin bent back.

Cup-shaped (Fig. 121.), of nearly the same form, with the margin straight.

Funnel-shaped (Fig. 122.), inversely conical.

Salver-shaped (Fig. 117.), when the tube is cylindrical, but very long, and the limb expanded.

Wheel-shaped, the same as salver-shaped, with the tube very short.

Ringent or *Gaping* (Fig. 123.), when the limb is divided into two parts, the upper more or less arched, the under oblong; these parts are called *lips*.

Personate or *Masked* (Fig. 124.), when the limb is divided into two parts, which are closely pressed together.

The *Polypetalous Corolla* consists of two or more distinct pieces or petals. In each petal there are distinguished two parts: the *claw* (Fig. 125, *a.*), which is the narrow portion; and the *border* or *lamina* (Fig. 125, *b.*), the expanded parts. The following are the principal kinds.

Cruciform or *Cross-like* (Fig. 126.), when four petals, having long claws, stand opposite to each other in pairs.

Rosaceous (Fig. 127.), roundish petals, destitute of claws, spread out in the form of a rose.

Papilionaceous or *Butterfly-like* (Fig. 128.), when four petals, differing in form, stand together. These different petals have particular names. The uppermost, which is commonly the largest, is named the *standard*. (Fig. 129.) The two side petals, standing opposite to each other, are the *wings*. (Fig. 130.) The undermost petal, is the *keel*. (Fig. 131.)

The Corolla is called *regular*, when its general form is uniform, as in Fig. 127, 126, 117; *irregular*, when this is not the case, as in Fig. 123, 124. An *equal* corolla is regular, and has its divisions all of one size, as in Fig. 117, 120.

III. *Of the Nectary.*

The *Nectary* is that part of the flower which contains or secretes honey. In monopetalous flowers, this part is the tube of the corolla. Sometimes it is a production of the corolla, and sometimes of the calyx. In other cases it is a part distinct from either. The following kinds may be mentioned.

The *Spur* (Fig. 132.) is a horn-shaped production of the corolla.

Scales, on the petals.

Pores, or small holes, which occur on various parts of the flower.

Glands, or soft roundish bodies.

IV. *Of the Stamens.*

The *Stamens* are essential parts of the flower, consisting each of a bag filled with powder, generally supported upon a stalk. There are thus distinguished three parts in the stamen: the filament, the anther, and the pollen.

1. The *Filament* (Fig. 133. *a.*) is a longish body destined for the support of the anther. It varies greatly in form, being

Hair-like, of equal thickness throughout, and as fine as a hair.

Thread-like, thicker than a hair.

Awl-shaped, thicker below than above.

Dilated, compressed and expanded on the sides.

Connate or *United*, when several filaments adhere together.

Incurved, bent towards each other.

Recurved, bent outwards.

Equal, when all are of equal length; and *Unequal*, when some are longer than the others.

2. The *Anther* (Fig. 133, *b.*) is a hollow, cellular body, containing a quantity of *pollen* or dust. It is commonly oblong, but varies greatly in form, being linear, globular, kidney-shaped, arrow-shaped, &c. It may also be cleft at the extremities, awned, one-celled, two-celled, &c.

Connate, when several grow together, forming a tube.

Erect (Fig. 133.), when it stands with its base straight on the point of the filament.

Incumbent (Fig. 134.), lying across the top of the filament.

Lateral (Fig. 135.), attached by its side.

Sessile, destitute of filament.

3. The *Pollen* or *Dust*, is contained in the anther. At a certain stage of vegetation, the anther bursts, and the pollen is scattered around.

V. *Of the Pistils.*

The Pistil (Fig. 136) is also an essential part of the flower, occupying its centre. It consists of three parts, the germen, the style, and the stigma.

1. The *Germen* (Fig. 136, *a.*) is the undermost part of the pistil, and is the rudiment of the fruit. The number of germens varies, like that of the stamens. It is also of various forms: egg-shaped, globular, elliptical, &c. It may also be

Superior, when situated above the corolla or calyx.

Inferior, when situated below these parts.

Sessile, when destitute of a stalk; or *Stalked*, when supported upon one.

2. The *Style* (Fig. 136, *b.*) is a small stalk, seated upon the germen, and terminated by the stigma. It may be hair-like, thread-shaped, awl-shaped, &c.

Terminal, when it stands on the top of the germen.

Lateral, when attached to the side.

Erect, standing straight; *spreading*, *recurved*, &c.

Persistent, remaining after the fruit is matured.

3. The *Stigma* (Fig. 136, *c.*) is the top of the style, which is generally enlarged. It varies greatly in form, and is variously lobed or divided. It is frequently downy, and always more or less moist. The pollen falling upon the stigma, influences the seeds contained in the germen, so that they become capable of attaining maturity.

VI. *The Seed-vessel.*

The *Seed-vessel* or *Pericarp* is formed of the enlarged germen. It is not an essential part, the seeds being frequently destitute of any covering. The following kinds may be mentioned.

1. The *Capsule* (Fig. 137.) is a dry seed-vessel, generally of a membranous texture. It frequently splits in a regular manner into several parts when ripe. These parts are called *valves*. Internally it consists of a single cavity, in which case it is called one-celled or unilocular; or of two or more cavities. These cavities or cells are separated by *partitions*; and there is usually a central stalk or *column*, to which the seeds are attached.

2. The *Pod* or *Siliqua* (Fig. 138.) is a long dry seed-vessel, of two pieces or valves, separated by a longitudinal partition, to the edges of which the seeds are alternately attached. When the Pod is as broad as long, it is called a *Pouch* or *Silicula*, as in Fig. 139.

3. The *Legume* (Fig. 140.) is a dry elongated seed-vessel, formed of two oblong valves, without any longitudinal partition, and bearing the seeds along one of its margins only.

4. The *Nut* (Fig. 141.) is a seed covered with a hard *shell*, which does not burst. The seed is called the *kernel*.

5. The *Drupe* (Fig. 142.) is a nut, covered with a thick fleshy coat.

6. The *Apple* (Fig. 143.) is a fleshy fruit, containing a capsule.

7. The *Berry* (Fig. 144.) is a juicy fruit, which contains several seeds, and never bursts. The *Compound Berry* (Fig. 145.) consists of several single ones, each containing a seed.

8. The *Cone* or *Strobilus* (Fig. 146, 147.) is a catkin hardened and enlarged.

VII. *Of the Seed.*

The *Seed* is the part of the plant which is destined for its propagation. It consists of two halves, called *cotyledons* (Fig. 148.), which at germination change into leaves. Between these, on one side, is the *Embryo* (Fig. 148, *a.*), consisting of two bodies, one which descends into the earth, becoming a root, and is called the *rostellum* (Fig. 143, *b.*), the other ascending, and becoming the stem and leaves. (Fig. 148, *c.*) The cotyledons are covered with an *outer* and an *inner* coat. The depression seen externally opposite the place where the embryo lies, is called the *scar*. The seed while growing is attached to the parent plant by a thread called the *umbilical cord.*

Seeds are very diversified as to form, but it is only necessary here to describe certain parts which are frequently attached to them.

The *Pappus* or *Seed-down* is a kind of bristly or feathery crown attached to certain seeds. It is

Simple (Fig. 149.), when it consists of undivided hairs.

Feathery (Fig. 150.), when each of the hairs is subdivided, like the shaft of a feather.

Sessile. (Fig. 149.)

Stipitate or *Stalked.* (Fig. 151.)

Chaffy, when formed of small scales.

The *Tail* (Fig. 152.) is an elongated appendage formed of the permanent style.

The *Wing* (Fig. 153.) is a dilated membranous appendage.

In concluding the subject of the flower and fruit, it is necessary to mention a few additional circumstances respecting them.

A *complete* flower is one furnished with both calyx and corolla.

An *incomplete* flower is when the corolla is wanting.

A *naked* flower is one destitute of a calyx.

A *perfect* flower is one having both stamens and pistils.

A *stamenifèrous* or *barren* flower is one having stamens, but destitute of pistils.

A *pistilliferous* or *fertile* flower is one having pistils but no stamens.

A *neutral* flower is one destitute of both stamens and pistils.

Plants are called *monœcious*, when stameniferous flowers and pistilliferous flowers exist on the same plant.

Diœceous plants are those in which pistilliferous flowers grow on one plant, and stamenïferous flowers grow on another plant of the same species.

A *simple* flower is when a single flower is contained in a calyx.

A *compound* flower is when a number of flowers, with united anthers, grow together within a common calyx.

An *aggregate* flower is when a number of flowers, generally stalked, and with separated anthers, are inclosed within a common calyx.

VIII. *Of the Receptacle.*

The *Receptacle* is the point at which all the parts of a flower meet.

In the compound flowers this part is broad, and requires particular consideration. It is in them

Flat, when perfectly even. (Fig. 154.)

Convex or *Concave.*

Conical, when it rises in the centre. (Fig. 155.)

Smooth, destitute of hairs; *Hairy*, covered with hairs; or *Chaffy*, covered with membranous scales.

CLASSIFICATION AND DESCRIPTION OF PLANTS.

Plants are so numerous and diversified that it would be impossible to acquire any extensive knowledge of them, or even to retain their names, without the aid of arrangement or classification. Plants may be arranged in two ways. Every one, on looking around him in the vegetable world must perceive that certain plants have so great a resemblance to each other, that they naturally form themselves in the mind into groups: Thus the grasses form a natural family, the leguminous plants another, and so forth. Were the natural affinities of all plants as readily perceived, it would be easy to distribute them into classes; but this is not the case. For this reason, the *Natural* arrangement has been substituted by another, called the *Artificial*, which, although it does not proceed upon the principle of natural affinities, yet frequently places together plants which resemble each other in their structure and appearance. The artificial arrangement usually adopted by botanists is that of Linnæus.

All the *individuals* which bear a particular and intimate resemblance to each other, constitute a *species*, whether among plants or among animals. Thus, as the latter are generally better known, all the Foxes in the world constitute the species Fox. All the species which bear a certain more general resemblance to each other constitute a *genus*. Thus the Fox species, the Jackal species, the Wolf species, and the Domestic Dog species, with several others, constitute the genus Dog. All the genera which bear a certain more general resemblance to each other constitute an *order*. Thus, the dog genus, the hyena genus, the cat genus, and others, constitute the order Feræ or Beasts of Prey. All the orders that resemble each other in certain more general characters, constitute a *class*. Thus the orders Feræ, Ruminating animals, Four-handed animals or Monkeys, and others, form the class Mammalia. So is it in plants.

There are thus four degrees in classification: the Class, the Order, the Genus, and the Species. The latter, by certain accidental causes, produces *Varieties*. Thus, in animals, the greyhound, the spaniel, and the sheep-dog, are varieties of the Dog species; and in plants, the numerous kinds of apples are produced by varieties of the Crab-Apple Tree.

The Linnæan Classes of Plants are twenty-four, and their distinctions are founded upon the number, situation, and proportion of the stamens.

The first eleven Classes are characterized solely by the *number* of the stamens, and have Greek names expressive of these distinctions.

1. MONA'NDRIA.	This class includes all plants having a single stamen in each of their flowers.
2. DIA'NDRIA.	Two stamens in each flower.
3. TRIA'NDRIA.	Three stamens.
4. TETRA'NDRIA.	Four stamens.
5. PENTA'NDRIA.	Five stamens.
6. HEXA'NDRIA.	Six stamens.
7. HEPTA'NDRIA.	Seven stamens.
8. OCTA'NDRIA.	Eight stamens.
9. ENNEA'NDRIA.	Nine stamens.
10. DECA'NDRIA.	Ten stamens.
11. DODECA'NDRIA.	From twelve to nineteen stamens.

The next two classes differ from each other with respect to the *situation* of the stamens.

12. ICOSA'NDRIA. Twenty or more stamens inserted into the calyx.
13. POLYA'NDRIA. Twenty or more stamens inserted into the receptacle.

In the next two *proportion* is employed.

14. DIDYNA'MIA. Two long and two short stamens.
15. TETRADYNA'MIA. Four long and two short stamens.

The next three have united filaments.

16. MONADE'L-PHIA. Stamens united by their filaments into a tube.
17. DIADE'LPHIA. Stamens united into two sets.
18. POLYADE'L-PHIA. Stamens united into three or more sets.

The next five are founded upon various circumstances.

19. SYNGENE'SIA. Stamens united by their anthers into a tube, the flowers compound.
20. GYNA'NDRIA. Stamens united to the pistil.
21. MONŒ'CIA. Stamens and pistils in separate flowers, but both kinds of flowers growing on the same plant.
22. DIŒ'CIA. Stameniferous flowers on one plant, and pistilliferous flowers on another plant, of the same species.
23. POLYGA'MIA. Stameniferous flowers, pistilliferous flowers, and perfect flowers, all growing on the same plant.

The last class consists of plants whose organs of fructification are not well ascertained, or differ greatly from those of the preceding classes:

24. CRYPTOGA'MIA.

The *Orders* in the first thirteen classes are founded on the number of the styles, or stigmas, and are named as follows:

MONOGY'NIA. One style, or sessile stigma.
DIGY'NIA. Two styles, or sessile stigmas.
TRIGY'NIA. Three styles.
TETRAGY'NIA. Four styles.
PENTAGY'NIA. Five styles.

HEXAGY'NIA. Six styles.
HEPTAGY'NIA. Seven styles.
OCTAGY'NIA. Eight styles.
ENNEAGY'NIA. Nine styles.
DECAGY'NIA. Ten styles.
DO'DECAGY'NIA. About twelve styles.
POLYGY'NIA. More than twelve styles.

It is unnecessary here to explain the orders of the other classes, as the circumstances on which they are founded will be seen by referring to the following systematic arrangement of British Plants.

The *Genera* are characterized by marks taken from the parts of fructification exclusively.

The *Species* are distinguished from each other by characters taken from all the parts of the plant.

The *Generic Character* is of two kinds: the *factitious* or *artificial*, which is short, and consists of the more distinctive circumstances; and the *natural*, which consists of a more or less full description of all the organs of fructification.

The *Specific Character* is brief, and consists of the circumstances by which one species is distinguished from every other of the same genus.

METHOD OF EXAMINING PLANTS.

In the following arrangement of British Plants, there is a brief description of each species, by an attentive comparison of which with the plants that one may pick up, he will be enabled to discover their names. The whole are arranged into classes, genera, and species, according to the Linnæan system. As example is better than precept, we shall suppose that a person commencing the study of British plants, and having made himself acquainted with the different parts of plants described and illustrated by figures in the preceding pages, falls in with a specimen of the plant figured in pl. x. fig. 156.

He has first to glance over the whole plant, beginning with the root and examining all its parts in succession. He will thus find that the root is fibrous; the stem creeping at the base, simple, ascending obliquely, and having a line of hairs on each side; the leaves egg-shaped, sessile, wrinkled, deeply serrated, and more or less hairy; the clusters of flowers lateral, axillar, rising

higher than the stem, and having their stalks hairy all round, with lance-shaped stipules; the flowers numerous, with a calyx consisting of four lance-shaped segments, a very beautiful, large, bright blue, corolla, marked with darker lines, and pale-purple on the back, monopetalous, wheel-shaped, divided into four segments, of which the upper is the largest, and the lower the least; two anthers attached to the corolla, a germen crowned by a single thread-shaped style; and an inversely heart-shaped, compressed capsule, of two cells and four valves, containing numerous roundish seeds.

As there are two stamens, he turns over the leaves to the class *Diandria;* and as there is only one style, he refers the plant to the order Monogynia. In the table of short essential generic characters, he finds that there are ten genera mentioned, namely: *Ligustrum, Fraxinus, Veronica, Pinguicula, Utricularia, Lycopus, Salvia, Circæa, Lemna,* and *Cladium.* He has therefore to find which of these corresponds with his plant. But he observes that there are four divisions marked by asterisks, under which these genera are grouped. He therefore reads the characters of these divisions, and finds that his plant cannot belong to the first, for although it has the flowers inferior, that is, has the calyx and corolla placed under the germen, and monopetalous, yet the corolla is not regular, that is, does not present equal segments. Passing to the next division, he finds it to agree with the plant. He has now to compare it with the characters of the three genera included in this division, and finds it to correspond with those of Veronica, inasmuch as it has a "wheel-shaped, deeply four-cleft corolla," with the "lower segment smaller," and a "two-celled capsule." The plant therefore belongs to the genus of which *Veronica* is the name.

In the tables at the head of each class, the genera are placed according to certain circumstances connected with their artificial arrangement, but are numbered with reference to the order in which they are afterwards more fully described, and which is that of their natural affinity.

The species is now to be found, and for this purpose he turns over a few leaves, until he comes to the 4th genus of the class, viz. Veronica, where he finds the natural character of the genus, or a particular description of the parts of fructification, which he compares with his plant, and finding them to agree, satisfied as to the genus. He finds a great number of species

described, all of which he would have to compare with his plant until he found one to agree with it, were it not that here, as in the generic table, there are subdivisions, to which asterisks are prefixed, that shorten his labour. To the first of these divisions the plant does not belong, for its flowers are not in *terminal*, but in lateral clusters. He therefore passes on to the next division: *flowers in lateral clusters or spikes*, and as his plant has such flowers, he has only to read the specific characters under that division.

V. Beccabunga has elliptical leaves; *V. Anagallis* has them lance-shaped; in *V. Scutellata* they are oblong, and therefore it cannot belong to these species. In *V. Montana*, the leaves are egg-shaped, which is the case with the plant in hand, but they are stalked, whereas in the plant under examination they are sessile. In *V. Chamædrys*, they are egg-shaped and sessile, in which respects they agree; deeply serrate also, which is the case; and the stem has two opposite rows of long hairs, which was a circumstance that attracted our notice at our first inspection of the plant. The name of the plant therefore is *Veronica Chamædrys*, the latter word being its *specific*, the former its *generic* name. Its English name is seen to be *Germander Speedwell*.

The words "Clusters many-flowered; leaves egg-shaped, sessile, deeply serrate; stem with two opposite rows of long white hairs," form the *specific character*. After it a brief description of certain parts of the plant is given, together with an indication of its duration, time of flowering, place of growth, and sometimes its uses. Reference is then made to a figure of it in Sir J. E. Smith's *English Botany*, and to a fuller description in the *English Flora* of the same author.

In this manner, the student proceeds with every plant that he may procure. The assistance of a person already somewhat proficient in the science, will be useful at the commencement, but is not indispensable. Sometimes a plant may present itself which is not found to belong to the class or order indicated by its stamens and styles. In this case there will be found a reference in Italics, at the end of the generic table to certain genera, by turning to which it will be found. Thus, a plant occurs with one stamen and one style, which we do not find to correspond with the genera *Salicornia*, *Hippuris*, *Zostera*, or *Chara*. But we observe, after these genera, in the table, reference made to several plants, of which the first is *Valeriana rubra*. We then

turn to the Index for *Valeriana*, and finding that genus at the page indicated, compare our plant with the species *V. rubra*, when we find it to agree. This is one of the most puzzling circumstances connected with the examination of plants, and arises from the impropriety of separating a species from others of the same genus, although it may happen to differ in the number of stamens or pistils.

With these explanations, it is presumed that the student will be enabled to use the following descriptive arrangement of British Plants. Should a term occur, not included in the preceding account of the parts of plants, it will be found by referring to the glossary at the end of the volume.

The only instruments necessary in the examination of plants are, a sharp-pointed pen-knife, or a pin, for separating the parts of fructification, and a small lens for inspecting the more minute parts.

The Generic and Specific names of plants being in Latin, it has been judged expedient, for the benefit of young botanists not acquainted with that language, to mark the accented syllables. The following rules for the pronunciation of these words may also be attended to.

1st. The diphthongs *æ* and *œ* are pronounced like the English long *e*.

2d. The letter *e* at the end of a word is always sounded.

3d. The letters *ch* are pronounced hard, like *k*.

4th. In words beginning with *sce* and *sci*, the *c* is soft.

5th. The letters *c* and *g*, before *e* and *i*, and before *æ* and *œ*, are soft, but before other vowels hard. In words of Greek origin, however, it is customary to make the *g* always hard; as in Monogynia, Syngenesia.

DIRECTIONS

FOR

PRESERVING PLANTS.

It is unnecessary to enumerate all the advantages resulting from the possession of a collection of preserved plants, as they can be fully appreciated only by a person who has made considerable progress in the study of Botany. But the beginner requires to be informed, that nothing can more materially aid him in his endeavours to become familiar with the objects which vegetation presents to his view, than such a collection, to which he can at all times refer, either for refreshing his memory, or for instituting a more minute examination than he had previously made. Plants are generally preserved by drying, and a collection of this kind is called a *Hortus siccus* or *Herbarium*. Various methods are in use for drying plants, but the following, being among the most simple and efficacious, and attended with little difficulty, is here preferred.

The articles necessary for the accomplishment of the object in view are, a quantity of smooth, soft paper, of large size (16 quires perhaps); eight boards of the same size, about an inch thick, of hard wood; four iron weights, or pieces of lead, two of them about forty pounds weight, the others half that number. Or in place of these weights a number of clean bricks may be used, or in short any heavy bodies of convenient form. Along with these articles, a botanical box is necessary. This box is made of tin, and varies in size, from nine inches to two feet in length, according to the taste and avidity of the collector.

In gathering plants for this purpose, such as are smaller than the size of the paper are to be taken up roots and all. In many cases, portions only of plants can be preserved, on account of their size, and then the most essential parts are to be selected, including always the flowers. Plants to be preserved are to be

gathered in dry weather, and immediately deposited in the tin box, which prevents their becoming shrivelled by evaporation. If gathered in wet weather, they must be laid out for some time on a table or elsewhere to undergo a partial drying. When roots have been taken up along with the stems, they ought to be first washed, and then exposed for some time to the air.

Let us now suppose that a dozen specimens are procured. Over one of the boards lay two or three sheets of the paper, on the uppermost of which spread out the plant to be dried, unfolding its various parts, not however, so as to injure its natural appearance. A few of the flowers and leaves ought to be laid out with particular care. Over this specimen lay half a dozen sheets of paper, on the uppermost of which lay another plant as before, and so on successively, until the whole are disposed of. A few sheets are then laid upon the last, and a board placed over all.

Plants, viewed with reference to drying, may be divided into two classes, the one comprehending those which being thin, soft, and flexible, require little pressure to reduce them to a level, the other including such as being stiff and thick require much pressure. Supposing the above plants to have been of the first class, we lay upon the upper board one of the smaller weights. A series of more stubborn specimens being, in like manner, placed between other two boards, we lay one of the larger weights upon them.

Should more specimens be collected next day, they are disposed of in the same manner; and thus successively. At the end of three days generally, the plants first laid in are to be taken out, together with the paper about them. They are to be laid in fresh paper, three or four sheets being placed between every two plants, and the whole put between two boards, with a weight over them. The second series is similarly treated next day, and so on. The paper from which the plants have been removed is to be dried for future use.

There will thus be four sets of plants: two in the first stage of drying, and two in the second stage. The plants of the second stage sets should be taken out about three days after they have been deposited, and after dry paper has been put about them, returned to their places. The paper may thus be shifted until the plants be perfectly dry, when they are finally removed. Each plant is then placed in a sheet of dry paper,

and along with it is deposited a slip of paper, on which are written the name of the plant, the place in which it was gathered, the time of gathering, the soil, and such other circumstances as may tend to elucidate the history of the species. Thus prepared, the plants are packed up in bundles, which gradually enlarge their dimensions, or increase in number, until the end of the season.

Having in this manner prepared a certain number of plants, the collector has now to arrange them. For this purpose he has to procure a quantity of good stout writing or printing paper of large size, folded in folio, which is to be stitched in coloured covers, making fasciculi of five or six sheets each. A quantity of fine large post or other writing paper, in half sheets, folio size, cut round the edges, is also to be at hand. Let a number of narrow slips of different lengths be cut from a piece of the same paper, and let some prepared isinglass or dissolved gum be in readiness, together with a camel-hair pencil. Take a dried plant, lay it upon a leaf of the fine cut paper, then fasten it down by means of a few of the slips, to which isinglass or gum has been applied, laid across the stem and some of the branches. Two or three slips are generally sufficient for a plant or specimen. In this manner all the dried plants destined to form part of the herbarium are treated. Write the name of each species on the top of the leaf, and transcribe the notice respecting the place in which it was gathered, &c. at the bottom. Then arrange the plant according to system, and lay one between every two pages of the fasciculi. The fasciculi are formed into bundles, by being laid alternately up and down upon each other, as they do not lie conveniently when the heads of the plants are all at the top of the bundle, because the stalks and roots are thicker than the flowers. These bundles, consisting each of ten fasciculi; may be covered by pieces of pasteboard tied by strings. The collection is kept on the shelves of a cabinet, or in a chest. To prevent the attacks of insects, it is necessary to keep beside it a piece of sponge soaked full of rectified oil of turpentine; and to ensure it against decay from damp it ought to be kept in a dry and well ventilated place.

The above is an orderly method of forming a herbarium; but many other expedients are resorted to. Most plants dry sufficiently well between the leaves of old books, and many collectors save themselves the trouble of forming a neat collection,

by huddling up their specimens in the least expensive or laborious manner.

Another method of putting up dried plants is the following: The specimens are fastened to leaves of stout paper of uniform size; the species are then arranged in order, and all those of the same genus are placed within one or more sheets of paper, on the outside of which the generic name is written. The generic fasciculi are then collected into bundles, on which are written the names of the classes and orders. Some persons keep their specimens loose, within sheets of paper. This method is the most convenient for the minute examination of the plants, but has disadvantages which render it inexpedient in ordinary cases.

A

SYSTEMATIC

ARRANGEMENT OF BRITISH PLANTS.

Class I. MONANDRIA.

Plants bearing Flowers with one Stamen only.

Order I. MONOGYNIA. *One Pistil.*

1. SALICOR'NIA. *Calyx* tumid, undivided. *Corolla* none. *Stamens* one or two. *Seed* one, invested by the calyx.
2. HIPPU'RIS. *Calyx* obsolete. *Corolla* none. *Stigma* one, simple. *Seed* one, inferior.
3. ZOSTE'RA. *Spadix* linear, many-flowered. *Calyx* none. *Corolla* none. *Stigmas* two, linear. *Nut* with one kernel.
4. CHA'RA. *Calyx* none. *Corolla* none. *Berry* many-seeded.

(*Valeriana rubra. Alchemilla arvensis.* Several species of *Salix.*)

Order II. DIGYNIA. *Two Pistils.*

5. CALLITRICHE. *Calyx* none. *Petals* two, inferior. *Seeds* four, naked, compressed. Some flowers pistilliferous and others stameniferous only.

MONANDRIA.—MONOGYNIA.

1. SALICOR'NIA.

Calyx inferior, of one leaf, undivided, tumid, permanent. Corolla none. Filament one or two, longer than the calyx. Anther oblong, two-lobed, erect. Germen egg-shaped, under the stamen. Style short, undivided. Stigma cleft. Seed egg-shaped, invested by the calyx.

S. herbácea. Common Jointed Glasswort or *Salt-wort. Marsh Samphire.* Stem herbaceous, erect; joints compressed, notched, their intervals somewhat enlarged upwards; spikes tapering upwards.——One foot high: stem bushy, green, the branches nearly cylindrical: spikes of of numerous short joints, each bearing three sessile flowers on two opposite sides. Annual: flowers in August and September: grows on muddy or moist sandy sea-shores; frequent. Has a saltish taste, is eaten by cattle, and makes a good pickle. The various species of this

genus are employed on the coasts of the Mediterranean for making Barilla. *Engl. Bot.* vol. vi. pl. 415. *Engl. Fl.* vol. i. p. 2.

S. procum'bens. Procumbent Jointed Glasswort or *Saltwort.* Stem herbaceous, procumbent; intervals of the joints inversely conical. ——About six inches long: stem-branched from the base, with the joints obtusely quadrangular: stamens two: stigma irregularly notched. Annual: flowers in August and September: grows in salt marshes; frequent. Has the same properties as the last species. *Engl. Bot.* vol. xxxv. pl. 2475. *Engl. Fl.* vol. i. p. 2.

S. rádicans. Creeping Jointed Glasswort or *Saltwort.* Stem woody, procumbent and rooting at the base, erect above; joints compressed, notched, their intervals somewhat cylindrical; spikes oblong; stamens two.——About a foot long: upper part of the stem herbaceous and erect, with opposite branches: spikes obtuse: stigma deeply divided into two or three segments. Perennial: flowers in August and September: grows on muddy sea-shores; not frequent. *Eng. Bot.* vol. xxiv. pl. 1691. *Engl. Fl.* vol. i. p. 3.

S. fruticósa. Shrubby Jointed Glasswort or *Saltwort.* Stem woody, ascending; joints and their intervals cylindrical; spikes cylindrical; stamens two.——Spikes small, short and dense. Perennial: flowers in August and September: grows in muddy places, on the sea-shore; very rare. Weymouth, Shepey Island, Isle of Grain. *Eng. Fl.* vol. i. p. 3.

In his Flora Scotica and British Flora, Hooker has united *S. herbacea* with *S. procumbens* to form his species *S. herbacea*; and *S. radicans* with *S. procumbens* to form his species *S. radicans.*

2. HIPPU'RIS.

Calyx reduced to a mere border, crowning the germen. Corolla none. Filament superior, longer than the calyx. Anther two-lobed, compressed. Style awl-shaped. Stigma simple, acute. Seed oval, naked.

H. vulgáris. Mare's-tail. Leaves linear, in whorls.——From one to two feet high: root creeping: stem erect, simple, jointed: leaves linear, smooth, acute, arranged in numerous whorls, each containing about twelve: flowers axillar, solitary, sessile: germen egg-shaped: anther very large, red. Perennial: flowers in May and June: grows in pools and marshes; not common. Norfolk and Staffordshire; Duddingston Loch, near Edinburgh; Castle-semple Loch, in Renfrewshire; about Forfar and Aberdeen; Marsh of Nisbost, in Harris; Islay, Benbecula, Uist and Barra. *Engl. Bot.* vol. xi. pl. 763. *Engl. Fl.* vol. i. p. 4. *Hooker, Fl. Scot.* p. 2.

3. ZOSTE'RA.

Calyx none, excepting the base of the leaf, inclosing the spike-stalk, and splitting lengthwise. Corolla none. Spadix linear, bearing numerous flowers. Anther oblong, one-celled, attached laterally. Germen egg-shaped, sessile. Style simple, curved outwards. Stigmas two, thread-shaped, curved. Drupe cylindrical. Nut one, elliptical, striated. Kernel of the same form.

Z. mari'na. Grass Wrack or *Sea-grass.* Leaves entire, obscurely

three-ribbed, linear; stem slightly compressed.——Leaves very long, grass-green, obtuse: spadix pale green. Perennial: flowers in August: grows on sandy shallows and banks in the sea, and is thrown up abundantly after storms. When dried, after being steeped in fresh water, the leaves form excellent bedding; they are also used for packing. The lower part of the stem, which is of a reddish brown colour, contains much saccharine matter, and is chewed by the Hebridians, like the root of *Orobus tuberosus*. *Engl. Bot.* vol. vii. pl. 467. *Engl. Fl.* vol. i. p. 5. Hooker. *Fl. Scot*, p. 259.

4. CHA'RA.

Calyx none. Corolla none. Anther sessile, globose, one-celled. Germen egg-shaped, spirally grooved. Style none. Stigma in five divisions. Berry egg-shaped, containing numerous minute spherical seeds.

C. vulgáris. Common Stonewort, or *Water Horse-tail.* Stems branched, striated, roughish; whorled branches tapering; bracteas four together. ——From six to ten inches long: principal branches alternate: subordinate branches in whorls of from six to twelve, tapering, towards the top of the stem bearing rows of minute floral leaves in fours: germen egg-shaped, sessile, in the centre of the floral leaves: anther sessile upon the base of the germen. The whole plant green when fresh, usually studded with whitish calcareous particles, and extremely fetid; when dry, hard and brittle. Annual: flowers in July: grows in muddy ditches and pools, entirely immersed; common. *Engl. Bot.* vol. v. pl. 336. *Engl. Fl.* vol. i. p. 6.

C. hispida. Prickly Stonewort, or *Water Horse-tail.* Stems branched, furrowed, covered above with deflected prickles; whorled branches, tapering; bracteas four together.——Stems spirally twisted, extremely brittle: subordinate branches from eight to ten in a whorl. Differs from C. vulgaris chiefly in its prickly stem, and more numerous floral leaves. Fetid and frequently crusted. Annual: flowers in July and August: grows immersed in muddy ditches and pools. *Engl. Bot.* vol. vii. pl. 463. *Engl. Fl.* vol. i. p. 7.

C. flexilis. Smooth Water Horse-tail. Stems transparent, smooth, unarmed; whorled branches cylindrical, obtuse, some of them divided at the end; no bracteas.——Stems from one to two feet long, slender, green, not crusted: subordinate branches undivided or forked: anthers sometimes solitary, but generally accompanied with two germens, or with one only, at the forks of the whorled branches. Annual: flowers from April to August: grows immersed in ditches, pools and rivers. *Engl. Bot.* vol. xv. pl. 1070. *Engl. Fl.* vol. i. p. 7.

C. translúcens. Great transparent Water Horse-tail. Stems transparent, smooth, unarmed; whorled branches simple, cylindrical, obtuse, those bearing flowers axillar, compound; no bracteas.——Annual: flowers in June and July: grows in pools and ditches; rare. Near Shrewsbury; at Browston, Suffolk. Smith. About Edinburgh and near Forfar. Hooker. *Engl. Bot.* vol. xxvi. pl. 1855. *Engl. Fl.* vol. i. p. 8.

C. nidífica. Proliferous Water Horse-tail. Stems transparent, smooth, unarmed; whorled branches simple, elongated, those bearing flowers

axillar, compound; bracteas unequal.——Annual: flowers from August to October: grows in saltwater ditches; rare. Shoreham Harbour, Sussex, and near Cley, Norfolk. Smith. *Engl. Bot.* vol. xxiv. pl. 1703. *Engl. Fl.* vol. i. p. 8.

C. grácilis. Slender Shining, or *Water Horse-tail.* Stems transparent, smooth, unarmed; whorled branches acute, repeatedly forked, often bearing flowers, as well as the axillar compound ones; bracteas none.——Annual: flowers in September: grows in ponds and boggy pools; rare. Fish ponds in Jersey; St. Leonard's forest, Sussex. Smith. The three last species are from Smith. For their fuller description, see *English Flora. Engl. Bot.* vol. xxx. pl. 2140. *Engl. Fl.* vol. i. p. 9.

DIGYNIA.

5. CALLITRICHE.

Calyx none. Petals two, curved inwards, opposite, equal. Filament slender, elongated. Anther two-lobed. Germen superior, four-robed. Styles two, hair-like. Stigmas acute. Seeds four, oblong.

C. vérna. Short-leaved Water Star-wort. Leaves lance-shaped, the upper elliptical, entire at the end.——Stems feeble, numerous, branched, leafy: lower leaves in pairs, lance-shaped; upper crowded in the form of a star, elliptical or inversely egg-shaped and floating. Flowers axillar, solitary, sessile, very small; some imperfect flowers mixed with the others. Annual: flowers in April, May, and June: grows by the edges of pools, ditches, and especially brooks; common. *Eng. Bot.* vol. xi. pl. 722. *Engl. Fl.* vol. i. p. 10.

C. autumnális. Long-leaved Water Star-wort. Leaves strap-shaped, uniform, notched at the end.——Stems long and feeble: leaves uniform, the uppermost floating. Annual: flowers from June to October: grows in pools, ditches, and brooks. The species of this genus grow in dense masses, sometimes sufficiently firm to support a person. They are of a lively green colour, fragile, and succulent. *Engl. Bot.* vol. xi. pl. 722. *Engl. Fl.* vol. i. p. 10.

Class II. DIANDRIA.

Plants bearing Flowers with Two Stamens.

Order I. MONOGYNIA. *One Pistil.*

* *Flowers inferior, of one petal, regular.*

1. LIGUS'TRUM. *Corolla* four-cleft. *Berry* two-celled; cells two-seeded.
2. FRAX'INUS. *Corolla* none, or deeply four-cleft. *Capsule* compressed, two-celled; cells one-seeded.

** *Flowers inferior, of one petal, irregular; seeds inclosed in a seed-vessel.*

4. VERONI'CA. *Corolla* wheel-shaped, deeply four-cleft, lower segment smaller. *Capsule* two-celled.

5. PINGUI'CULA. *Corolla* gaping, spurred. *Capsule* one-celled. *Calyx* five-cleft.
6. UTRICULA'RIA. *Corolla* masked, spurred. *Capsule* one-celled. *Calyx* of two leaves.

*** *Flowers inferior, of one petal, irregular; seeds naked.*

7. LY'COPUS. *Corolla* tubular, four-cleft; upper segment notched. *Stamens* distant, simple. *Calyx* tubular, five-cleft.
8. SAL'VIA. *Corolla* gaping. *Filaments* transversely attached to a footstalk. *Calyx* two-lipped.

**** *Flowers Superior.*

3. CIRCÆ'A. *Corolla* of two petals. *Calyx* of two leaves. *Capsule* two-celled; cells one-seeded.

***** *Flowers destitute of petals.*

9. LEM'NA. *Calyx* of one piece, membranaceous. *Capsule* one-seeded.
10. CLA'DIUM. *Glumes* of one valve, one flowered, imbricated; the outer ones empty. *Drupe* destitute of bristles at the base.

(Salicórnia. Fraxinus excelsior. Rhynchospora alba.)

Order II. DIGYNIA. *Two Pistils.*

11. ANTHOXAN'THUM. *Calyx* of two chaff-scales, containing one flower. *Corolla* of two husks, awned.

DIANDRIA.—MONOGYNIA.

1. LIGU'STRUM.

Calyx inferior, tubular, with four upright blunt teeth. **Corolla** of one petal, funnel-shaped; limb expanded, divided into four deep, egg-shaped segments. Stamens opposite, in the mouth of the tube. Germen oval. Style very short. Stigma thick, cleft. Berry globular, two-celled, with two seeds in each cell. Seeds convex on one side, angular on the other.

L. vulgáre. Common Privet, Prim, or *Print.* Leaves between elliptical and lance-shaped, obtuse, with a small point; flowers in dense terminal panicles.——A small shrub. Leaves opposite, nearly sessile, dark-green, frequently remaining through the winter: flowers white, small: berries globular, black, bitter and nauseous. Flowers in June and July: grows in hedges and copses, in gravelly soil. Rocks of Dunnerholme, and above Cartmel Wells. Used for low hedges, especially in gardens. It grows fast, and may be raised from cuttings. *Engl. Bot.* vol. xi. pl. 764. *Engl. Fl.* vol. i. pl. 13.

2. FRA'XINUS.

Calyx none, or in four deep segments. Corolla none, or in four deep segments. Filaments short. Anthers large, with four furrows. Germen superior, egg-shaped, two-celled. Style short. Stigma cleft. Capsule lance-shaped, flat.

F. excel'sior. Common Ash. Leaves pinnate, with lance-shaped, serrated leaflets; flowers destitute of calyx and corolla.——A very beautiful tree, with smooth, grey bark, large black buds, and pinnate leaves. In old trees, the lower branches, after bending downwards, curve upwards at their extremities: leaves stalked, consisting of five or six pairs of lance-shaped, nearly sessile, opposite leaflets, with a terminal one: flowers in loose panicles: anthers large, purple; capsules with a flat leaf-like termination, generally of two cells, each containing a flat oblong seed. It assumes its foliage later than any of our trees, and loses it early; the capsules generally fall soon, but sometimes remain through the winter. A variety occurs with simple leaves, and another with drooping branches. Flowers in April and May: grows in woods and hedges, but is probably not indigenous. The wood, which is whitish and tough, is employed for numerous purposes in domestic and rural economy, and the leaves are eaten by cattle, but communicate a disagreeable taste to butter. *Engl. Bot.* vol. xxiv. pl. 1698. *Engl. Fl.* vol. i. p. 14.

3. CIRCÆ'A.

Calyx of one leaf, superior; tubular at the base; the limb with two egg-shaped deflected segments. Petals two, inversely heart-shaped, equal. Filaments hair-like, as long as the calyx. Anthers roundish. Germen roundish. Style thread-like. Stigma dilated, notched. Capsule universally egg-shaped, covered with hairs, two-celled, each cell one-seeded. Seeds oblong.

C. alpina. Mountain Enchanter's Night-shade. Stem ascending, smoothish; leaves heart-shaped, toothed, shining.——Root spreading: whole plant nearly smooth: stem prostrate at the base, red: leaves pale-green, delicate: flowers rose-coloured, in short, terminal, and axillar bunches. Perennial: in shady places, in woods, and among stones, in the lower parts of mountainous districts. Lancashire, Westmoreland and Cumberland; Lochbroom, shores of Lochness and Loch Tay, and many of the Highland glens. *Engl. Bot.* vol. xv. pl. 1057. *Engl. Fl.* vol. i. p. 16.

C. lutetiàna. Common Enchanter's Night-shade. Stem erect, hairy; leaves egg-shaped, denticulate.——Root spreading, difficult to be extirpated: stem little branched, generally with a solitary, terminal bunch of flowers: leaves dark-green, opaque, hairy: flowers small, white or tinged with red. Perennial: woods, copses, hedges and shady lanes: flowers in June and July. *Engl. Bot.* vol. xv. pl. 1056. *Engl. Fl.* vol. i. p. 15.

4. VERONI'CA.

Calyx inferior, with four unequal segments, permanent. Corolla wheel-shaped, permanent; its limb divided into four unequal segments, of which the lower is smallest. Filaments spreading, tapering downwards. Anther oblong. Germen compressed. Style thread-shaped, declining, as long as the stamens. Stigma small, notched. Capsule more or less universally heart-shaped, compressed, two-celled, four-valved. Seeds numerous, roundish.

* *Flowers in terminal clusters or spikes.*

V. serpyllifólia. *Smooth* or *Thyme-leaved Speedwell.* Clusters somewhat spiked; leaves egg-shaped, slightly crenate; capsule inversely heart-shaped, shorter than the style.——Root of long white fibres: stem about five inches high, decumbent and rooting at the base, branched, leafy: leaves opposite, with short stalks, slightly hairy, three-nerved: bracteas elliptical: flowers of a delicate pale blue, reddish before they are fully expanded, with deep blue lines. Perennial: flowers in May and June: pastures and road-sides, common. *Engl. Bot.* vol. xv. pl. 1075. *Engl. Fl.* vol. i. p. 20.

V. humifúsa. *Creeping Mountain Speedwell.* Clusters somewhat spiked; leaves heart-shaped but roundish, slightly crenate; stems prostrate.——Plant entirely prostrate, rooting: leaves roughish, lower ones stalked and opposite, upper sessile and alternate: bunch of a few blue flowers, on short stalks. Perennial: grows on the highest mountains of Scotland, under wet shady rocks. Found also on the Cheviot hills, by Mr. Winch. This is considered by Smith and Hooker as a variety of *V. serpyllifolia.* Dickson. *Linn. Trans.* v. ii. p. 288.

V. alpina. *Alpine Speedwell.* Cluster corymbose; leaves elliptical, egg-shaped, somewhat serrate; capsule egg-shaped, longer than the style.——Root creeping: stem about four inches high, simple, ascending, rooting at the base, leafy: leaves opposite, smooth, nearly sessile: bracteas and segments of the calyx ciliated: flowers small, bright blue. Perennial: flowers in June and July: grows by the margins of rills, near the summits of mountains in the Highlands: Ben Nevis, Ben Lawers, Ben Lomond, &c. *Engl. Bot.* vol. vii. pl. 484. *Engl. Fl.* vol. i. p. 19.

V. saxátilis. *Rock Speedwell.* Cluster corymbose, few-flowered; leaves elliptical; stems spreading; capsule egg-shaped, longer than the calyx.——Three or four inches long: stems decumbent at the base, woody, branched: leaves opposite, small, elliptical, the upper ones oblong or inversely egg-shaped, slightly serrated towards the end, dark green, smooth: flowers from three to seven: corolla large, deep blue, with the throat red: flower-stalks much longer than the bracteas. Perennial: flowers in June and July: grows on rocks, on some of the higher mountains of Scotland: Ben Lawers, Meal Greadha. *Engl. Bot.* vol. xv. pl. 1027. *Engl. Fl.* vol. i. p. 19.

V. fruticulósa. *Flesh-coloured Shrubby Speedwell.* Clusters somewhat spiked, many-flowered; leaves between elliptical and lance-shaped; stems erect; capsule egg-shaped, hardly longer than the calyx.——Stems decumbent at the base, woody, branched, then erect and simple: leaves distantly notched or serrated, pale green, hairy towards the margin: flowers numerous: corolla pale purplish red, with deeper lines: flower-stalks scarcely longer than the bracteas. Perennial: flowers in July: found on Cruachan, in Argyllshire, by Dr. Walker; and on Ben Lawers, by Mr. Brown. *Engl. Bot.* vol. xv. pl. 1028. *Engl. Fl.* vol. i. p. 18.

V. spicáta. *Spiked Speedwell.* Spike conical, many-flowered; leaves opposite, elliptical, obtuse, unequally and bluntly serrated; stem ascending.——From four to eight inches high: stem simple: leaves downy, broader on the lower part of the stem, and stalked, the

uppermost narrow; flowers nearly sessile, deep blue; bracteas linear. Perennial: flowers from July to September: grows in dry pastures; rare. Newmarket Heath, and about Bury St. Edmunds. Smith. *Engl. Bot.* vol. i. pl. 2. *Engl. Fl.* vol. i. p. 17.

V. hy'brida. Welsh Speedwell, Bugle-leaved Speedwell. Spike cylindrical, many-flowered; leaves opposite, broadly elliptical, obtuse, bluntly serrated; stem erect.——Leaves hairy, broader than in *V. spicata:* flowers blue; closely allied to the preceding. Perennial: flowers in July and August: found on Craig Breiddin, Montgomeryshire, by Mr. Bowman, and on Humphrey Head, near Cartmel Wells, Lancashire. *Engl. Bot.* vol. x. pl. 673. *Engl. Fl.* vol. i. p. 17.

** *Flowers in lateral Clusters or Spikes.*

V. Beccabúnga. Short-leaved Water Speedwell, or *Brooklime.* Clusters opposite; leaves elliptical, obtuse, somewhat serrate, smooth; stem procumbent, rooting at the base.——The whole plant succulent and glossy: stems decumbent, generally floating: flowers blue, in long, stalked clusters. Perennial: flowers in June and July: grows in brooks and in ditches with running water; common. *Engl. Bot.* vol. x. pl. 655. *Engl. Fl.* vol. i. p. 20.

V. Anagállis. Long-leaved Water Speedwell, or *Brooklime.* Clusters opposite; leaves lance-shaped, acute, distinctly serrate, smooth; stem erect.——The whole plant succulent and glossy: stems erect, from one to three feet high: flowers pale blue, frequently purplish. Perennial: flowers in June and July: brooks, ditches, and pools; not so common as the last. *Engl. Bot.* vol. xi. pl. 781. *Eng. Fl.* vol. i. p. 21.

V. scutellàta. Narrow-leaved Marsh Speedwell. Clusters alternate; leaves oblong or linear, somewhat toothed; fruit-stalks bent backwards. ——The whole plant slender: stems weak, spreading, sometimes decumbent and rooting, from nine to twelve inches high: leaves sometimes entire at the margin: fruit-stalks remarkably spreading: flowers whitish, streaked with blue. Perennial: flowers in June and July: grows in marshy places with gravelly soil; not common. *Eng. Bot.* vol. xi. pl. 782. *Engl. Fl.* vol. i. p. 21.

V. montàna. Mountain Speedwell. Clusters elongated, few-flowered; leaves egg-shaped, serrate, stalked; stem hairy all round.——Roo fibrous: stems weak, decumbent, leafy: leaves deeply serrate, thin, shining, slightly hairy: clusters loose: flowers pale blue, with purple lines: capsule of two orbicular lobes, compressed with a sharp ciliated margin. Perennial: flowers in May and June, moist woods; not common. Charlton Wood, Kent; near Worcester; Kirkstal Abbey, near Leeds; Shortwood, Pucklechurch, Gloucestershire; common in Yorkshire; Roslyn woods, near Edinburgh; Cliesh, Kinross; Cartlan Crags, on the Clyde. *Engl. Bot.* vol. xi. pl. 766. *Engl. Fl.* vol i. p. 23.

V. Chamæ'drys. Germander Speedwell. Clusters many-flowered; leaves egg-shaped, sessile, deeply serrate; stem with two opposite rows of long white hairs.——Stems decumbent at the base, marked with two lines of long hairs, which change sides between each pair of leaves: leaves wrinkled and hairy, with large serratures: clusters long, shooting up beyond the stem: flowers large, bright blue, with deeper streaks, externally pale purple: capsule inversely heart-shaped. Peren-

nial: flowers in May and June: grows on dry banks, under hedges, in open pastures and in woods; very common. The infusion of this species and *V. officinalis* has been recommended as a substitute for tea. *Engl. Bot.* vol. ix. pl. 623. *Engl. Fl.* vol. i. p. 23.

V. officinàlis. Common Speedwell. Clusters spiked; leaves broadly elliptical, serrate, rough with short hairs; stem procumbent, hairy.——Stems prostrate, rooting at the base, from six to eighteen inches long: leaves with short stalks, stiffish, pale green, spikes of numerous light blue or purplish flowers, veined with deeper blue: partial flower-stalks shorter than the bracteas: capsule inversely heart-shaped. Perennial: flowers in May and June: grows on dry banks, in open pastures, on heaths, and in dry woods; not uncommon. *Engl. Bot.* vol. xi. pl. 765. *Engl. Fl.* vol. i. p. 22.

V. Allionii. Smooth-leaved Speedwell. Flowers in dense spikes; leaves egg-shaped, somewhat serrate, smooth; stem procumbent, smooth.——Resembles the preceding, but differs in being entirely destitute of hairs, and in having a much denser spike of deep blue flowers. Smith considers it as a mere variety of the preceding, and asserts that the real *V. Allionii* is a totally distinct exotic species. Perennial: flowers in June and July: found on mountains in Angus-shire, by Mr. G. Don. *Engl. Fl.* vol. i. p. 22. *Fl. Scot.* p. 7.

V. hirsùta. Small Hairy Speedwell. Flowers spiked; leaves between elliptical and lance-shaped, somewhat serrate, slightly hairy; stem procumbent; capsule inversely heart-shaped, undivided.——Two or three inches high, leaves stalked, often entire, clusters long, many-flowered: flowers pale blue. Perennial: flowers in June: found in dry heathy places, in the district of Carrick, Ayrshire, by Mr. James Smith, and in various parts of Scotland by others. *Engl. Fl.* vol. i. p. 23. *Fl. Scot.* p. 6.

*** *Flowers Solitary.*

V. agrèstis. Procumbent Chickweed Speedwell. Leaves egg-shaped, deeply serrate, the lower ones opposite; flower-stalks about equal to the leaves in length, curved when in fruit; corolla shorter than the calyx; seeds cupped.——Root small: stem hairy on two opposite sides, branched at the base, spreading, hairy: leaves broad, with short stalks: corolla small, bright blue: capsule two-lobed, tumid, rough. Annual: flowers from April to September: grows in cultivated fields; common. *Engl. Bot.* vol. xi. pl. 783. *Engl. Fl.* vol. i. p. 24. *Fl. of Berwick.* vol. i. p. 226.

V. filifor'mis. Spreading Chickweed Speedwell. Leaves heart-shaped, deeply serrated, alternate; flower-stalks very long, always straight; corolla longer than the calyx; seeds cupped.——Stems one or two feet long, spreading, covered with soft white hairs: corolla large, light blue, with deeper lines: capsule inversely heart-shaped, rough. Annual: flowers from August to October: grows in cultivated fields: found in Berwickshire, by Dr. G. Johnstone, and in Sussex, by Mr. Borrer. *Fl. of Berwick.* vol. i. p. 225.

V. arven'sis. Wall Chickweed Speedwell. Leaves heart-shaped, broadly serrate, lower ones stalked, upper lance-shaped, sessile.——Stems nearly erect: leaves nearly sessile: corolla small, pale blue, with deeper lines: capsule inversely heart-shaped, compressed, ciliated.

Annual: flowers in May and June: on the tops of walls, in dry fields, and among rubbish; common. *Engl. Bot.* vol. xi. pl. 734. *Engl. Fl.* vol. i. p. 24.

V. hederifólia. Ivy-leaved Chickweed Speedwell. Small Henbit. Leaves broadly heart-shaped, five-lobed; segments of the calyx heart-shaped acute, ciliated; seeds cupped, wrinkled.——Stems procumbent, spreading: leaves flat, generally five-lobed, the upper three-lobed: flowers small, pale blue, with deeper lines: capsule two-lobed, turgid. Annual: flowers from March to December: grows in cultivated fields, under hedges, in woods and among rubbish; common. *Engl. Bot.* vol. xi. pl. 784.

V. triphyl'los. Upright or *Trifid Chickweed Speedwell.* Leaves with finger-like divisions; fruit-stalks longer than the calyx; seeds flat. ——Stem three or four inches high, branched at the base: lower leaves undivided, opposite; upper in three or five segments, alternate: flowers deep blue: capsule inversely heart-shaped, compressed, hairy: style very short: seeds egg-shaped. Annual: flowers in April and May: grows in sandy fields; very rare. Norfolk and Suffolk. *Engl. Bot.* vol. i. pl. 26. *Engl. Fl.* vol. i. p. 26.

V. ver'na. Vernal Chickweed Speedwell. Leaves pinnatifid; uppermost lance-shaped; fruit-stalks shorter than the calyx; seeds flat.—— Stem from two to four inches high: leaves deeply divided, the middle segment larger; the divisions become less numerous as the leaves ascend on the stem, the upper being simple: flowers small, light blue, with deeper lines: capsule inversely heart-shaped, compressed, downy and ciliated. Annual: flowers in April: grows in sandy fields; very rare. First found by Sir John Cullum, about Thetford, Bury, &c. *Engl. Bot.* vol. i. pl. 25. *Engl. Fl.* vol. i. p. 26.

5. PINGUI'CULA.

Calyx small, gaping, permanent; upper lip erect, three-cleft; lower reflected, cleft. Corolla gaping, having the margin irregularly five-cleft, with a spur behind. Filaments cylindrical. Anthers roundish. Germen globose. Style very short. Stigma with two unequal lips. Capsule egg-shaped, one-celled. Seeds numerous, cylindrical.

P. vulgáris. Common Butterwort. Spur cylindrical, acute, as long as the petal; upper lip two-lobed, lower divided into three segments; capsule egg-shaped.——Whole plant smooth, covered with small transparent grains: leaves radical, egg-shaped, fleshy, with the edges involute, pale green: flowers drooping, deep purple: scape slightly hairy towards the top. Perennial: flowers in June: marshy places, and especially wet heaths: common in the north of England, and in all parts of Scotland. It is imagined to cause diseases in sheep, but it appears not to be eaten by these animals or other cattle. *Engl. Bot.* vol. i. pl. 70. *Engl. Fl.* vol. i. p. 28.

P. lusitánica. Pale Butterwort. Spur curved, obtuse, shorter than the petal; divisions of the petal nearly equal; capsule globose.—— Whole plant villous: leaves egg-shaped, thin, somewhat translucent, involute at the edges, very pale green, veined with purple: flowers pale purple or rose colour: scape hairy. Perennial: flowers in June: grows in marshy places and wet heaths: Dorsetshire, Hampshire,

Devonshire and Cornwall: in many parts of the Highlands and Hebrides much more common than the other species. The two species are readily distinguished by their general appearance; *P. lusitanica* being much more delicate and paler than the other.

6. UTRICULA'RIA.

Calyx of two small, egg-shaped, equal leaves. Corolla masked; upper lip flat, obtuse, erect; lower lip with a prominent heart-shaped palate; spur projecting from the base. Stamens short. Anthers small, adhering together. Germen globose. Style thread-shaped, as long as the calyx. Capsule large, globose, one-celled. Seeds numerous, small.

U. vulgáris. Greater Hooded Water Milfoil, or *Bladderwort*. Spur conical; upper lip of the corolla as long as the palate; leaves divided into numerous segments.——Stems much branched, lying prostrate in the water: leaves small, with very slender divisions, having minute prickles at the margin. Scape erect, round, bearing from three to eight bright yellow flowers, arranged in a bunch: lower lip much larger than the upper, with a projecting palate closing the mouth: spur curved, acute: the roots, stems, and leaves are covered with numerous vesicles, having an aperture closed by a valve, and its margin armed with bristles. In the earlier stages these vesicles are filled with water, and when it becomes necessary for the plant to rise and expand its flowers in the air, they become filled with air: after some time, the air in the vesicles is substituted by water, and the plant descends to ripen its seeds. Perennial: flowers in July: grows in ditches and pools. *Engl. Bot.* vol. iv. pl. 253. *Engl. Fl.* vol. i. p. 30. *Fl. Scot.* p. 9.

U. intermédia. Middle Hooded Water Milfoil, or *Bladderwort*. Spur conical; upper lip of the corolla double the length of the palate; leaves divided into three linear forked segments.——Smaller than the former: leaves repeatedly forked: flowers smaller and paler: bladders on branched stalks, not on the leaves. Perennial: flowers in July: grows in ditches and pools; not common. Lake near Forfar, and various parts of Aberdeenshire. *Engl. Bot.* vol. xxxv. pl. 2489. *Eng. Fl.* vol. i. p. 30. *Fl. Scot.* p. 9.

U. minor. Lesser Hooded Water Milfoil, or *Bladderwort*. Spur very short, obtuse, keeled; upper lip as long as the palate; leaves divided into three linear segments, which are again similarly divided; corolla gaping.——Smaller than the last: flowers about five, pale yellow: Palate not projecting, the mouth being open. Perennial: flowers in July: ditches and pools; not common. Somersetshire, Norfolk, Cumberland, Westmoreland; near Yarmouth, Edinburgh, and Glasgow, and in Skye. *Engl. Bot.* vol. iv. pl. 254. *Engl. Fl.* vol. i. p. 31. *Fl. Scot.* p. 9.

7. LY'COPUS.

Calyx tubular, with five acute segments. Corolla tubular, with four segments, the upper broader and notched. Stamens simple, longer than the corolla, bent. Anthers small. Germen four-cleft. Style thread-shaped, as long as the stamens. Stigma cleft. Seeds four, inversely egg-shaped, at the bottom of the calyx.

L. europæ'us. Water Horehound. Gipsywort. Leaves deeply serrate.——Two feet high: allied to the genus Mentha, &c., and like it having a four-cornered stem: leaves opposite, narrow, egg-shaped, wrinkled, very deeply serrated: flowers whitish in dense whorls. Perennial: flowers from July to September: grows on the banks of pools and brooks in gravelly soil; frequent in England; rare in Scotland. Loch Lindore, Fifeshire; Delvine, Perthshire; Arran.

8. SAL'VIA.

Calyx tubular, ribbed, with two unequal lips. Corolla having the tube dilated upwards, compressed; upper lip concave; lower lip broad, three-lobed, the middle lobe largest, notched. Stamens with two spreading branches, one of which bears a one-celled anther. Germen four-cleft. Style thread-shaped, curved. Stigma cleft. Seeds four, roundish, in the bottom of the calyx.

S. praten'sis. Meadow Sage, or *Clary.* Leaves oblong, heart-shaped at the base, crenate, the upper ones embracing the stem; whorls nearly leafless; upper segment of the corolla clammy.——A beautiful plant, about three feet high, with large purple flowers: leaves wrinkled: whorls of six flowers, scarcely longer than the floral leaves. Perennial: flowers in July: grows in dry pastures and by hedges; rare. Near Cobham in Kent; common in Surrey and Sussex; Wick-cliffs, Gloucestershire; between Middeton, Stoney and Audley Oxfordshire. *Engl. Bot.* vol. iii. pl. 153. *Engl. Fl.* vol. i. p. 34.

S. Verbenáca. Wild Sage, or *Clary.* Leaves egg-shaped, serrate, sinuate; corolla narrower than the calyx.——From one to two feet high: stem decumbent at the base: lower leaves egg-shaped, stalked; upper narrower, more acute, sessile: flowers small, purple; upper lip concave, compressed; lower three-lobed; floral leaves as long as the calyx. Perennial: flowers in June and July: grows in dry pastures and on banks, in gravelly soil; not very rare. *Engl. Bot.* vol. iii. pl. 153. *Engl. Fl.* vol. i. p. 34.

9. LEM'NA.

Calyx of one leaf, membranous. Corolla none. Stamens thread-shaped, lateral, unequal, longer than the calyx. Anthers of two globes. Germen superior, egg-shaped. Style shorter than the stamens. Capsule one-celled, globose, containing one seed.

L. triscul'ca. Ivy-leaved Duckweed. Fronds stalked, between elliptical and lance-shaped, thin, serrated towards the point; roots solitary.——Fronds about half an inch long, reticulate, pellucid at the margin: leaf-stalks issuing from the sides of another leaf, from a fissure there: capsule egg-shaped, pointed, sitting on the upper surface of the frond. Annual: flowers from June to September: occurs floating in ditches, pools and lakes; common. All the species of this genus are said to be eaten by ducks and other herbivorous aquatic birds. *Engl. Bot.* vol. xiii. pl. 926. *Engl. Fl.* vol. i. p. 32. *Fl. Scot.* p. 10.

L. minor. Lesser Duckweed. Fronds inversely egg-shaped, serrated, compressed, the lower stalked; roots solitary.——Fronds two or three lines long, rather thick and firm: flowers from June to September. *Annual:* occurs floating in dense masses, in ditches, pools

and lakes; common. *Engl. Bot.* vol. xvi. pl. 1095. *Engl. Fl.* vol. i. p. 32. *Fl. Scot.* p. 11.

L. gib'ba. Gibbous Duckweed. Fronds inversely egg-shaped, hemispherical beneath; roots solitary.——Fronds about a line long, green and plane above, bulging and purple beneath. Annual: flowers from June to September: occurs floating in ditches, pools and lakes; rare. *Engl. Bot.* vol. xviii. pl. 1233. *Engl. Fl.* vol. i. p. 32. *Fl. Scot.* p. 11.

L. polyrhiza. Greater Duckweed. Fronds broadly egg-shaped, a little convex beneath; roots numerous.——Fronds half an inch long, firm, green above, purple below. Annual: flowers unknown in Great Britain, occurs floating in stagnant water; rare. *Engl. Bot.* pl. 2458. *Engl. Fl.* vol. i. p. 33. *Fl. Scot.* vol. i. p. 11.

10. CLA'DIUM.

Calyx a one-valved, chaff-scale, concave, one-flowered. Corolla none. Stamen thread-shaped, longer than the husk. Anther linear, erect. Germen superior, egg-shaped, without bristles at the base. Style thread-shaped. Drupe egg-shaped, one-celled. Nut hard, egg-shaped, acute.

C. Mariscus. Prickly Twig-rush. Panicle repeatedly compound; stem round, smooth, leafy; leaves prickly at the edge, and along the keel.——Root long, and creeping: stem four or five feet high, erect, angular at the top: leaves keeled, ending in a sharp point, with prickly serratures: panicle erect, with numerous compound, furrowed branches. Perennial: flowers in July and August: grows in marshes and bogs in England; very rare. Formerly found in the moss of Restenat, near Forfar, but now extinct there. *Engl. Bot.* pl. 950. *Engl. Fl.* vol. i. p. 36.

DIGYNIA.

11. ANTHOXAN'THUM.

Calyx of two egg-shaped, pointed, concave chaff-scales, one-flowered. Corolla of two equal husks, shorter than the calyx, awned on the back. An internal corolla, or nectary, consisting of two egg-shaped, minute scales. Stamens hair-shaped, longer than the corolla. Anther oblong, forked at both ends. Germen superior, oblong. Styles short. Stigmas long, downy. Seed one, nearly cylindrical, tapering at each end.

A. odorâtum. Sweet-scented Spring Grass. Panicle spiked, oblong; flowers on short stalks, and longer than the awns.——About a foot high: leaves short, pale green: panicle dense, becoming brownish yellow: scales of the calyx unequal, acute, membranous, with a green bristly keel: husks of the corolla obtuse, hairy, shorter than the calyx, one with a short straight awn, the other with a longer twisted one: internal corolla or nectary of two very small, membranous scales. The pleasant smell of new made hay is chiefly owing to this plant, which in drying emits an odour similar to that of *Asperula odorata* and *Trifolium officinale*. Perennial: flowers in May: grows in pastures and meadows; common. This plant is a true grass, but is separated on account of its having only two stamens. It is eaten by cattle. *Engl. Bot.* pl. 647. *Engl. Fl.* vol. i. p. 97.

Class III. TRIANDRIA.

Plants bearing Flowers with Three Stamens.

Order I. MONOGYNIA. *One Pistil.*

* *Flowers superior.*

1. VALERIA'NA. *Corolla* of one petal, five-cleft, protuberant on one side at the base. *Seed* one, crowned with a feathery pappus.
2. FE'DIA. *Corolla* of one petal, five-cleft, protuberant on one side at the base. *Capsule* three-celled, crowned with the toothed calyx.
3. CRO'CUS. *Corolla* of six equal segments, resembling petals; tube longer than the limb. *Stigmas* folded.
4. TRICHONE'MA. *Corolla* of six equal segments; tube shorter than the limb. *Stigmas* deeply divided.
5. I'RIS. *Corolla* of six unequal segments resembling petals, the three outer reflected. *Stigma* divided into two lips resembling petals.

** *Flowers inferior, chaffy.*

6. SCHŒ'NUS. *Chaff-scales* single, in two rows, arranged in an imbricated spike, the outer empty. *Husks* none. *Style*, simple at the base, deciduous.
7. RHYNCHOS'PORA. *Chaff-scales* single, arranged in a spike imbricated all round, the outer empty. *Husks* none. *Style* enlarged at the base, permanent.
9. SCIR'PUS. *Chaff-scales* single, uniform, concave, arranged in a spike imbricated all round. *Husks* none. *Style* simple at the base, deciduous.
10. ELEO'CHARIS. *Chaff-scales* single, uniform, arranged in a spike imbricated all round. *Husks* none. *Style* enlarged at the base, permanent.
11. ERIO'PHORUM. *Chaff-scales* single, uniform, arranged in a spike imbricated all round. *Husks* none. *Seed* with numerous very long hairs arising from the base.
8. CYPE'RUS. *Chaff-scales* single, uniform, in two rows, arranged in an imbricated spike. *Husks* none. *Seed* naked at the base.
12. NARDUS. *Chaff-scales* two. *Husks* none.

(Some species of *Juncus*.)

Order II. DIGYNIA. *Two Pistils.*

* *Flowers in panicles. Calyx of two or three chaff-scales, containing one flower.*

15. ALOPECU'RUS. *Chaff-scales* two, nearly equal, acute. *Husk* one, awned at the base.
16. KNAPPIA. *Chaff-scales* two, nearly equal, abrupt. *Husks* two, unequal, awnless.
14. PHLEUM. *Chaff-scales* two, nearly equal, pointed. *Husks* two, concealed, awnless. *Seed* loose.
13. PHA'LARIS. *Chaff-scales* two, unequal. *Husks* three or four, the two innermost downy. *Seed* invested by the hardened internal husks.

17. POLYPO'GON. *Chaff-scales* two, equal awned at the summit. *Husks* two, concealed, the outermost with a terminal awn. *Seed* loose.

18. MI'LIUM. *Chaff-scales* two, unequal, tumid. *Husks* two, concealed. *Seed* invested by the hardened husks.

19. AGRO'STIS. *Chaff-scales* two, acute, awnless. *Husks* two, longer than the chaff-scales, membranous, tufted with hairs at the base. *Seed* loose.

20. CY'NODON. *Chaff-scales* two, acute, lance-shaped, equal. *Husks* two, very unequal, compressed. *Seed* invested by the hardened husks.

34. SPARTI'NA. *Chaff-scales* two, lance-shaped, unequal. *Husks* two, unequal, compressed. *Seed* loose.

38. STI'PA. *Chaff-scales* two, pointed, awnless. *Husks* two, nearly equal, the outer with a very long terminal twisted awn, jointed at its base.

39. LAGU'RUS. *Chaff-scales* two, unequal, fringed, with terminal feathery awns. *Husks* two, unequal, the outer with three awns.

21. DIGITA'RIA. *Chaff-scales* two or three, very unequal, awnless. *Husks* two, unequal, awnless. *Seed* invested by the hardened husks.

(Some species of *Arundo*. *Melica uniflora*.)

** *Flowers in panicles. Calyx of two chaff-scales, containing two or three flowers.*

23. AI'RA. *Chaff-scales* two, unequal. *Flowers* two. *Husks* two, the outer awned above the base. *Seed* loose in the husks.

26. ME'LICA. *Chaff-scales* two, unequal, awnless. *Flowers* two, together with the rudiments of a third. *Husks* two, awnless. *Seed* invested by the hardened husks.

25. HOL'CUS. *Chaff-scales* two, unequal. *Flowers* two, one of them bearing stamens only, and awned. *Husks* two, awned. *Seed* invested by the hardened husks.

22. PA'NICUM. *Chaff-scales* two, very unequal. *Flowers* two, one of them destitute of stamens and style, the perfect one awnless. *Husks* two. *Seed* invested by the hardened husks.

28. HIERO'CHLOE. *Chaff-scales* two, unequal, acute, awnless. *Flowers* three, the central one perfect, with two stamens, the lateral ones bearing three stamens, but no pistil. *Husks* permanently membranous. *Seed* loose. *Styles* distinct.

27. SESLE'RIA. *Chaff-scales* two, acute, somewhat awned. *Flowers* two or three, all perfect. *Husks* toothed or awned. *Seed* loose. *Styles* combined.

*** *Flowers in panicles. Calyx of two chaff-scales, containing more than two flowers.*

32. BRI'ZA. *Chaff-scales* two, nearly equal, heart-shaped, obtuse, awnless. *Husks* two, unequal, awnless. *Seed* united to the husks.

30. PO'A. *Chaff-scales* two, unequal, egg-shaped, acute, awnless. *Husks* two, unequal, the outer keeled, egg-shaped, acute, awnless. *Seed* loose, oblong.

29. GLYCE'RIA. *Chaff-scales* two, unequal, oblong, obtuse, awnless. *Husks* two, unequal, the outer ribbed, cylindrical, abrupt, awnless. *Seed* loose, cylindrical.

31. TRIO'DIA. *Chaff-scales* two, nearly equal, egg-shaped, acute,

awnless. *Husks* two, unequal, egg-shaped; the outer deeply cleft, with an intermediate point. *Seed* oval.

33. DACTYLIS. *Chaff-scales* two, unequal, lance-shaped, long-pointed, the larger keeled. *Husks* two, lance-shaped, the outer keeled and awned at the summit.

36. FESTUCA. *Chaff-scales* two, very unequal, lance-shaped, pointed. *Husks* two, unequal, the outer nearly cylindrical, pointed or awned. *Seed* oblong, loose.

35. CYNOSURUS. *Chaff-scales* two, equal, lance-shaped, long-pointed, awned. *Husks* two, unequal, the outer lance-shaped, keeled, awned at the summit. *Seed* oblong, loose.

37. BROMUS. *Chaff-scales* two, unequal, lance-shaped, acute, awnless. *Husks* two, unequal; the outer elliptical, cleft, awned near the summit. *Seed* elliptical, united to the inner husk.

40. AVENA. *Chaff-scales* two, unequal, broadly lance-shaped, awnless. *Husks* two, unequal; outer nearly cylindrical, pointed, deeply cleft, with a long twisted awn from the middle. *Seed* elliptical, united to the outer hardened husk.

24. ARUNDO. *Chaff-scales* two, unequal, lance-shaped, keeled, awnless. *Husks* two, unequal, surrounded by long hairs. *Seed* oblong, loose, but enveloped in the husks.

**** *Flowers spiked; arranged on a common stalk, having alternate lateral excavations.*

41. LOLIUM. *Chaff-scale* one, lance-shaped, fixed, opposite to the excavation, many-flowered.

42. ROTTBOLLIA. *Chaff-scales* two, lance-shaped, parallel, opposite to the excavation, two-flowered.

45. TRITICUM. *Chaff-scales* two, at each joint of the stalk, oblong, opposite to each other, transverse to the excavation, many flowered.

43. ELYMUS. *Chaff-scales* in several parallel pairs, opposite to the excavation, each pair containing several flowers.

44. HORDEUM. *Chaff-scales* in three parallel pairs, opposite to the excavation, each pair containing one flower.

Order III. TRIGYNIA. *Three Pistils.*

46. MONTIA. *Calyx* of two leaves. *Corolla* of one piece. *Capsule* three-valved, three-seeded.

48. POLYCARPON. *Calyx* of five leaves. *Petals* five, nearly entire. *Capsule* three-valved, many-seeded.

47. HOLOSTEUM. *Calyx* of five leaves. *Petals* five, jagged. *Capsule* six-toothed, many-seeded.

TRIANDRIA.—MONOGYNIA.

1. VALERIANA.

Calyx a slight border. Corolla of one tubular petal with a protuberance or spur at the base; limb divided into five obtuse segments. Filaments awl-shaped, erect, borne upon the corolla. Anther oblong. Germen inferior, oblong, one-celled. Style thread-shaped, as long as the stamens. Stigma simple. Seed oblong, compressed, crowned with the calyx expanded into a number of feathery rays.

V. rúbra. Red Valerian. Flowers with one stamen and a long spur; leaves lance-shaped, nearly entire.——From one to two feet high: lower leaves shortly stalked, entire: upper sessile, broader, sometimes toothed: flowers rose-coloured, numerous, arranged in a corymbose head. Perennial: flowers from June to September: grows on old walls and among rubbish. Kent, Devon, and Cornwall. *Eng. Bot.* vol. xx. pl. 1531. *Eng. Fl.* vol. i. p. 42.

V. officinális. Great Wild Valerian. Leaves all pinnate; leaflets lance-shaped, nearly uniform.——From two to four feet high: root tuberous, fetid: stem furrowed: leaflets broadly serrated: flowers pale rose-colour or whitish. There is a variety of smaller size, with more narrow leaflets, the root of which is more fetid. Perennial: flowers in June: grows by the sides of lakes, in marshes, moist meadows, by hedges, among rubbish, in dry pastures, and in woods; common. The root has a warm bitter taste. It is employed as an antispasmodic, generally in substance, although it communicates its properties to wine, water, or spirits. The roots of those plants which grow in dry situations, are preferred to those of the others. Cats and rats are said to be fond of this root. *Eng. Bot.* vol. x. pl. 698. *Eng. Fl.* vol. i. p. 43.

V. pyrendica. Heart-leaved Valerian. Leaves heart-shaped, serrated, stalked, the uppermost pinnated.——Two or three feet high: flowers pale rose-coloured. Perennial: flowers in July: grows in various parts of Scotland, but is probably not indigenous. *Engl. Bot.* vol. xxiii. pl. 1591. *Eng. Fl.* vol. i. p. 44.

V. dioica. Small Marsh Valerian. Flowers dicœcious; radical leaves egg-shaped, stem leaves pinnatifid.——Root creeping: stem six or eight inches high, erect: terminal lobe of the leaves large: flowers pale rose-coloured. Perennial: flowers in June: grows in moist meadows; frequent in England, rare in Scotland. *Eng. Bot.* vol. ix. pl. 628. *Eng. Fl.* vol. i. p. 43.

2. FEDIA.

Calyx consisting of three or four small teeth. Corolla of one tubular petal, with a protuberance at the base; limb divided into five obtuse segments. Filaments borne upon the tube. Anther roundish. Germen inferior, roundish, three-celled. Style thread-shaped. Stigma notched. Capsule membranous, three-celled, crowned by the permanent calyx. Seeds solitary, egg-shaped.

F. olitória. Common Corn-Salad, or *Lamb's Lettuce.* Leaves narrow tongue-shaped; flowers in heads; capsule inflated.——Stem about six inches high, repeatedly forked, furrowed: lower leaves tongue-shaped, stalked, stem-leaves sessile, sometimes a little toothed: flowers pale blue, in round heads: capsule smooth, crowned with three inflected teeth, of which one is much larger. Annual: flowers from April to June: grows in corn-fields and among rubbish; common. *Eng. Bot.* vol. xii. pl. 811. *Engl. Fl.* vol. i. p. 45. *Fl. Scot.* p. 15.

F. dentáta. Smooth-fruited Corn-Salad, or *Lamb's Lettuce.* Leaves narrow tongue-shaped; flowers solitary in the forks of the stem; capsule egg-shaped, taper-pointed, smooth.——Stem about ten inches high, repeatedly forked: leaves narrower than in the last, the upper ones more toothed: flowers flesh-coloured, in loose corymbs, one growing in each

fork of the stem: capsule ribbed, crowned with three unequal inflected teeth, of which one is much larger. Annual: flowers from April to June; not uncommon. The young leaves of this and the preceding species may be used as a salad. *Engl. Bot.* vol. xx. pl. 1370. *Engl. Fl.* vol. i. p. 45. *Fl. Scot.* p. 15.

F. mixta. Sharp rough-fruited Corn-Salad. Leaves tongue-shaped; flowers corymbose; capsule egg-shaped, taper-pointed, covered with spreading, incurved bristles.——Resembles the last in all respects, excepting in the fruit, which is also crowned with three teeth, but is hairy. Annual: flowers in June: found near Halesworth, Suffolk, by Dr. Hooker, whose characters are here borrowed. *Brit. Fl.* p. 16.

F. eriocárpa. Blunt rough-fruited Corn-Salad. Flowers corymbose; capsule crowned with the prominent cup-shaped, oblique, membranous, unequally five-toothed calyx, and covered with spreading, incurved bristles.——Annual: flowers in June. According to Dr. Hooker, from whom this species also is borrowed, discovered at Ormeshead, Caernarvonshire, by Mr .Wilson. *Brit. Fl.* p. 16.

3. CRO'CUS.

Calyx of two unequal, membranous sheaths, arising from the root. Corolla superior; tube long, erect; limb of six oblong equal segments. Filaments awl-shaped, shorter than the corolla. Anthers arrow-shaped. Germen inferior, roundish. Style thread-shaped, very long. Stigmas three, dilated upwards, folded, jagged. Capsule roundish, three-celled, three-valved. Seeds several, round.

C. sativus. Saffron Crocus. Stigma in three deep, narrow segments, hanging out of the corolla, tube smooth at the mouth.——Flower purple: stigma deep orange: anthers pale yellow: leaves linear, keeled, curved outwards. Perennial: flowers in September: grows in meadows and pastures, in England. The stigma of this plant is the *Saffron* of the shops. It was formerly greatly esteemed as a cordial, but is now nearly discarded. It gives a beautiful colour to water, wine, or spirits. *Eng. Bot.* vol. v. pl. 343. *Eng. Fl.* vol. i. p. 46.

C. vérnus. Purple Spring Crocus. Stigma in three short, wedge-shaped segments, not protruded, tube hairy at the mouth.——Flower purple: stigma pale. Perennial: flowers in March: grows in meadows and pastures, in England; rare. About Nottingham. *Eng. Bot.* vol. v. pl. 344. *Eng. Fl.* vol. i. p. 46.

C. reticulátus. Net-rooted Crocus. Stigma in three blunt undivided segments, not protruded, coat of the bulb strongly reticulated.——Bulb remarkable for its coating of reticulated fibres: corolla yellow, purple, or whitish, the three outer recurved petals marked with three dark purple lines. Perennial: flowers in March: grows in pastures and meadows in England; rare. Found at Barton, Suffolk, by Mr. D. Turner. *Ker in Curt. Mag.* vol. xviii. pl. 652. *Eng. Fl.* vol. i. p. 47.

C. nudiflórus. Naked-flowering Crocus. Stigma in three deeply divided, tufted segments, not protruded.——Corolla deep purple: stigma deep orange: leaves not produced along with the flower. Perennial: flowers in October: grows in sandy meadows, between Nottingham Castle and the Trent. *Engl. Bot.* pl. 491. *Engl. Fl.* vol. i. p. 47.

4. TRICHONE'MA.

Calyx a sheath of two lance-shaped permanent valves. Corolla superior; tube short, funnel-shaped; limb regular. Filaments arising from the mouth of the tube, much shorter than the limb. Anthers large, oblong. Style longer than the stamina. Stigmas three, equal, spreading, divided to the base. Capsule roundish. Seeds round.

T. Bulbocódium. Channelled Trichonema. Leaves linear, channelled, curved back, longer than the flower-stalks.——Bulb egg-shaped: flowers purple. Perennial: flowers in March and April: grows on grassy hillocks, in Guernsey. *Engl. Bot.* vol. xxxvi. pl. 2549. *Engl. Fl.* vol. i. p. 49.

5. I'RIS.

Calyx a sheath of two leaf-like permanent valves. Corolla superior, with six divisions, the three outer largest, rounded, reflected; the three inner erect, narrow. Filaments awl-shaped, lying on the reflected segments. Anthers oblong, depressed. Germen inferior, oblong, three-sided, with three furrows. Style very short. Stigmas three, very large, resembling petals, two-lipped. Capsule oblong, angular, three-celled, three-valved. Seeds numerous, large.

I. Pseudácorus. Yellow-Iris, Water-Flag, or *Flower-de-luce.* Inner segments of the corolla smaller than the stigmas.——Root large, horizontal, acrid: stem from two to four feet high: leaves sword-shaped, erect, deep green: flowers yellow, three together on the top of the stem, the large segments lined with dark purple. Perennial: flowers in June and July: grows in marshy places, and by the sides of streams and lakes, generally in extensive patches; frequent. The whole plant is extremely harsh to the taste, but cattle do not refuse the dried leaves. The root has been recommended for alleviating the pain of tooth-ache, and is used for dyeing black in the Hebrides. The leaves make excellent thatch; and are also employed for making bottoms to chairs. Dr. George Johnstone says the roasted seeds make an excellent substitute for coffee. *Engl. Bot.* vol. ix. pl. 578. *Engl. Fl.* vol. i. p. 49.

I. fœ'tida. Stinking Iris. Stem with one angle.——Stem about two feet high, cylindrical, but angular on one side: leaves sword-shaped, dull green, when bruised emitting a smell like rancid bacon; flowers dull purplish grey, with darker lines. Perennial: flowers in June and July: in all the south-west counties of England, very common, particularly about Teignmouth, on hedge-banks and sloping ground. *Engl. Bot.* vol. ix. pl. 596. *Engl. Fl.* vol. i. p. 50.

6. SCHŒ'NUS.

Calyx a chaff-scale. Corolla none. Spikes of a few flowers, together with numerous empty, crowded chaff-scales, arranged in two rows. Filaments hair-like. Anthers linear, erect. Germen superior more or less triangular. Style hair-like, simple, deciduous. Stigmas three, feathery. Seeds roundish, hard.

S. nigricans. Black Bog-rush. Straw round; spikes of flowers forming a roundish head, overtopped by one of the two floral leaves.

——Root of very long fibres, forming a thick tuft: straw about a foot high, sheathed at the base with broad scales of a blackish colour, the uppermost of which bear narrow acute leaves: spikelets black: anthers long, yellow: stigmas dark purple: seed white, shining. Perennial: flowers in June: grows in bogs and wet moors; common. *Engl. Bot.* vol. xvi. pl. 1121. *Engl. Fl.* vol. i. p. 52. *Fl. Scot.* p. 16.

7. RHYNCHO'SPORA.

Calyx a chaff-scale. Corolla none, excepting a few bristles. Spikes of a few flowers, together with numerous, empty, crowded chaff-scales, imbricated all round. Filaments hair-like. Anthers linear, erect. Germen superior, roundish. Style hair-like, enlarged at the base. Seed roundish, hard, crowned by the permanent base of the style.

R. álba. White-headed Beak-rush. Leaves tapering, linear, channelled; spikes forming a somewhat corymbose head; stamens two.——Straw from five to ten inches high, triangular, very slender: leaves erect: larger floral leaf a little longer than the head of flowers, which is white: stigmas two: seed inversely egg-shaped. Perennial: flowers in July and August: grows on wet heaths and in boggy places; common. *Engl. Bot.* vol. xiv. pl. 985. *Engl. Fl.* vol. i. p. 52. *Brit. Fl.* p. 20.

R. fúsca. Brown-headed Beak-rush. Leaves thread-shaped; spikes forming an egg-shaped head; three stamens.——Smaller than the last: leaves not tapering: head of flowers reddish-brown. Perennial: flowers in June: grows in bogs; rare. *Engl. Bot.* vol. xxii. pl. 1575. *Engl. Fl.* vol. i. p. 53. *Brit. Fl.* p. 20.

8. CYPE'RUS.

Calyx a chaff-scale. Corolla none. Spikes of numerous flowers, all perfect, excepting one or two at the bottom, imbricated in two rows. Filaments short. Anther linear. Germen roundish. Style deciduous. Seed pointed.

C. lon'gus. Sweet Cyperus. English Galingale. Umbel leafy, twice compounded; fruit-stalks naked; spikes alternate.——Stem from two to three feet high: spike-stalks sometimes amounting to twelve or thirteen, forming an umbel: spikes brown, five or six together. The root is agreeably aromatic to the smell, and warm and bitter to the taste. Perennial: flowers in July: grows in marshes; very rare. By a rivulet between St. David's Town and St. David's Head; at Walton in Gordon, Somersetshire. Smith. *Engl. Bot.* vol. xix. pl. 1309. *Engl. Fl.* vol. i. p. 54.

C. fus'cus. Brown Cyperus. Umbel with three leaves, compound; spikes crowded, spreading in all directions.—— Stems about six inches high: spikes numerous, brown. Annual: flowers in September. Found by Mr. Haworth in a meadow near Little Chelsea. Hooker. *Fl. Lond. New Series*, pl. 85. *Engl. Fl.* vol. i. p. 54.

9. SCIR'PUS.

Calyx an egg-shaped, concave chaff-scale. Corolla none. Spike of numerous flowers, all perfect. Filaments thread-like. Anthers linear. Style simple, deciduous. Stigmas three, downy. Seed three-*cornered, sometimes* furnished with soft hairs at the base.

* *Spikes solitary.*

S. cæspitósus. Scaly-stalked Club-rush. Straw round, sheathed with numerous scales at the base, some of them bearing short leaves; two outer chaff-scales as long as the spike.——Straws numerous from four to twelve inches high, growing in dense tufts, striated, upper sheaths ending in a short leaf: spike small, reddish-brown. Perennial: flowers in July: grows on peat soil; abundant. This is one of the most important of our native plants, in respect to pasturage. Its very numerous long fibrous roots form the principal part of the spongy varieties of peat. In the Highlands it is often seen occupying extensive tracts, almost exclusively, and forms excellent summer pasturage for cows, horses, and sheep. *Engl. Bot.* vol. xv. pl. 1029. *Engl. Fl.* vol. i. p. 17. *Fl. Scot.* p. 17.

S. pauciflo'rus. Chocolate-headed Club-rush. Straw round, sheathed at the base, leafless; two outer chaff-scales shorter than the spike.—— Spike smaller and darker than in the last: straw about six inches high: it resembles the last in its mode of growth and qualities. Perennial: flowers in July: grows abundantly in Scotland. *Engl. Bot.* vol. xvi. pl. 1122. *Engl. Fl.* vol. i. 17. *Fl. Scot.* p. 17.

S. flúitans. Floating Club-rush. Straw round, branched, leafy; spikes destitute of external enlarged scales.——Stem from six to ten inches long, slender, zig-zag, much branched: leaves linear, keeled, sheathing: spikes small, few-flowered, pale green: no bristles beneath the seed. Perennial: flowers in August: grows in ditches, and in shallow water on heaths. *Engl. Bot.* vol. iii. pl. 216. *Engl. Fl.* vol. i. p. 57. *Fl. Scot.* p. 18.

** *Straw round, bearing several spikes.*

S. lacus'tris. Bull-rush. Great Club-rush. Straw round, leafless; panicle cymose, twice compounded; bracteas two, shorter than the panicle.——Straws from four to six feet high, smooth, internally spongy: lower sheaths dark brown: a few short leaves at the base of the straw: spikes brown, forming a cyme or panicle. Perennial: flowers in July: grows in pools, and the edges of rivers, in muddy bottoms. It is sometimes used as thatch. Bottoms of chairs are very commonly made of it, as well as mats. *Engl. Bot.* vol. x. pl. 666. *Engl. Fl.* vol. i. p. 57. *Fl. Scot.* p. 18.

S. Holoschœ'nus. Round-headed Club-rush. Straw round, leafless; spikes nearly globular, closely set together, stalked; bracteas two, leafy, unequal, sharp-pointed.——Straws firm, about a foot high: spikes brown: the globular spikes, supported on stalks of various lengths, distinguish this at first sight from every other species. Perennial: flowers in July: grows on the sea-coast in the south of England: rare. Brounton Boroughs, Devonshire, &c. *Engl. Bot.* vol. xxiii. pl. 1612. *Engl. Fl.* p. 58.

S. setáceus. Bristle-stalked Club-rush. Straw bristle-like, leafy at the base; spikes few, sessile; bractea leafy, surmounting the spikes. ——Straws numerous, very slender, from two to five inches high: spikes from one to three, egg-shaped, greenish-brown. Annual: flowers in July and August: grows in moist sandy or gravelly places. *Engl. Bot.* vol. xxiv. pl. 1693. *Engl. Fl.* vol. i. p. 59. Fl. Scot. p. 19

S. caricínus. Compressed Club-rush. Straw roundish, leafy at the base; spikes collected into a two-rowed cluster; bractea leafy, surmounting the spikes; leaves flat, keeled.——Straw about a foot high, simple: leaves keeled, rough on the edges and keel: spikes chesnut brown. Perennial: flowers in July: grows in boggy places. *Engl. Bot.* vol. xi. pl. 791. *Engl. Fl.* p. 59. *Fl. Scot.* p. 16.

S. rúfus. Brown Club-rush. Straw round, leafy at the base; spikes collected into a two-rowed cluster; bractea short; leaves channelled. ——More slender than the last: straws about six inches high: leaves shorter and bristle-like, not flat or keeled: spike dark brown. Perennial: flowers in June and July: grows in boggy places. *Engl. Bot.* vol. xv. pl. 1010. *Engl. Fl.* vol. i. p. 60. *Fl. Scot.* p. 17.

*** *Straw triangular, bearing several panicled spikes.*

S. triquéter. Triangular Club-rush. Straw acutely triangular; spikes lateral; stigmas two.——Straws three feet high, acutely triangular, with the sides hollowed, the point erect and sharp; a single, short leaf: spikes egg-shaped, in a panicle coming from the side of the straw, near the top. Perennial: flowers in July and August: grows on the banks of large rivers exposed to the tide, as of the Thames, both above and below London; rare. *Engl. Bot.* vol. xxiv. pl. 1694. *Engl. Fl.* vol. i. p. 60.

S. carinátus. Blunt-edged Club-rush. Straw bluntly triangular; spikes terminal; stigmas two.——Straws triangular with the sides convex: panicle terminal, with a longish bractea: spikes egg-shaped, brown. Perennial: flowers in July and August: grows on the banks of large rivers exposed to the tide; along the Thames, &c.; rare. *Engl. Bot.* vol. xxviii. pl. 1983. *Engl. Fl.* vol. i. p. 61.

S. marítimus. Salt-marsh Club-rush. Straw triangular; panicle terminal, leafy; scales of the spikes three-cleft, the middle segment awl-shaped; stigmas three.——Straw from one to three feet high, leafy at the base and summit: leaves keeled, rough at the edges: spikes egg-shaped, reddish-brown. Perennial: grows on the banks of large rivers exposed to the tide, and in salt marshes; not uncommon. *Engl. Bot.* vol. viii. pl. 542. *Engl. Fl.* vol. i. p. 62. *Fl. Scot.* p. 19.

S. sylváticus. Wood Club-rush. Straw triangular, leafy; cyme terminal, repeatedly compound, leafy; scales of the spikes entire; stigmas three.——Straw from two to three feet high, leafy: leaves flat, rough at the edges and keel: spikes small, very numerous, dark brown, arranged in a compound panicled cyme. Perennial: grows in moist woods: flowers in July. *Engl. Bot.* vol. xiii. pl. 919. *Engl. Fl.* vol. i. p. 62. *Fl. Scot.* p. 19.

10. ELEO'CHARIS.

Calyx a chaff-scale. Corolla none. Spikes imbricated all round. Filaments hair-like. Anthers linear. Germen compressed. Style enlarged at the base, united to the germen by a narrow joint. Seed triangular, crowned by the permanent style.

E. palus'tris. Common Spike-rush. Straws round; stigmas two; seed flattened.——Roots fibrous: straws many together, erect, smooth, from six inches to a foot and a half high; sheaths at the base two or

three, the upper long, close, and green, the others brown: no leaves: spike egg-shaped or oblong, acute, reddish-brown. Perennial: flowers in June and July: grows in ditches, rivulets, and marshy ground, and at the edges of pools and lakes; abundant. *Engl. Bot.* vol. ii. pl. 131. *Engl. Fl.* vol. i. p. 64.

E. multicaúlis. Many-stalked Spike-rush. Straws round; stigmas three; seed acutely triangular.——Root fibrous: straws numerous, smooth, spreading, eight or ten inches high: spikes smaller and more slender than in the last. Perennial: flowers in July: grows in wet moors; this seems to be merely a variety of the last. *Engl. Bot.* vol. xvii. pl. 1187. *Engl. Fl.* vol. i. p. 64.

E. acicularis. Least Spike-rush. Straw four-cornered; stigmas three.——Roots creeping, fibrous, thread-like: straws thread-like, about three inches high: leaves none, the parts usually considered as such being sterile straws: spike very small, narrow elliptical, brownish. Perennial: flowers in July and August: grows by the sides of lakes, and in wet places on moors. *Engl. Bot.* vol. xi. pl. 749. *Eng. Fl.* vol. i. p. 65.

11. ERIO'PHORUM.

Calyx a flat membranous chaff-scale. Corolla none. Spike imbricated all round. Filaments hair-like. Anthers linear, protruded, pendulous. Germen inversely egg-shaped. Style thread-shaped. Stigmas three, longer than the style, reflected. Seed three-cornered, tapering to a point, furnished at the base with very long, soft, silky hairs.

* *Spike Single.*

E. alpin'um. Alpine Cotton-grass. Straw triangular, leafless above the base, which is sheathed; upper sheaths terminating in very short, linear leaves; spike lance-shaped.——Root creeping, scaly: straws eight inches high, about five, erect, striated, destitute of joints: leaves few, channelled, shorter than their sheaths: spike small, consisting of a few reddish scales with a green keel: hairs few and tortuous. Perennial: flowers in June and July: discovered in a moss near Forfar, now drained. *Engl. Bot.* vol. v. pl. 311. *Engl. Fl.* vol. i. p. 67. *Fl. Scot.* p. 20.

E. vaginátum. Hare's-tail Cotton-grass. Straw triangular above, round below; uppermost sheath inflated; spike egg-shaped.——Root creeping: straws jointed, smooth, about a foot high: leaves channelled, sheathing: spike large, egg-shaped, pointed, blackish, with membranous scales: hairs numerous, long, white and shining. Perennial: flowers in March and April: grows on heaths and in boggy places; common. *Engl. Bot.* vol. xiii. pl. 873. *Eng. Fl.* vol. i. p. 66. *Fl. Scot.* p. 20.

E. capitátum. Round-headed Cotton-grass. Straw rounded in its whole length; uppermost sheath inflated; spike roundish.——Root creeping: straws jointed, smooth, about eight inches high: leaves thicker than in the last: chaff-scales smaller, but firmer, brown: hairs much shorter. Perennial: flowers in July and August: grows in heaths in high situations. Ben Lawers. G. Don. *Engl. Bot.* vol. xxxiv. pl. 2387. *Eng. Fl.* vol. i. p. 67. *Fl. Scot.* p. 20.

** *Several Spikes on each Straw.*

E. angustifólium. Common Cotton-grass. Straw somewhat triangular; leaves linear; channelled; spike-stalks smooth; hairs four times the length of the spike.——Root creeping: straws from two to three feet high, jointed, and leafy: spikes generally four, of which one is sessile: leaves very narrow, triangular, rough on the edges. Perennial: flowers in April: grows on wet heaths, in peat-bogs and ditches; common. *Engl. Bot.* vol. viii. pl. 564. *Eng. Fl.* vol. i. p. 69.

E. polystáchion. Broad-leaved Cotton-grass. Straw triangular; leaves broadly linear, flat; hairs three times the length of the spike.——Root fibrous: straws two feet high, grooved, jointed and leafy: leaves broader than in the last, with an acute keel: spikes four or five, one sessile, brown, pendulous after flowering. Perennial: flowers in June: grows on wet heaths and in peat-bogs; common in Scotland. *Engl. Bot.* vol. viii. pl. 563. *Engl. Fl.* vol. i. p. 68.

E. pubéscens. Downy-stalked Cotton-grass. Straw triangular above, round below; leaves flat, lance-shaped; spike-stalks downy; hairs twice the length of the spike.——Smaller than the last: spikes numerous, black, their stalks downy. Perennial: grows in bogs and marshes; rare. Cherry Hinton Moor, Cambridgeshire, and Frogden in Scotland. Smith. *Engl. Fl.* vol. i. p. 69.

E. grácile. Slender Mountain Cotton-grass. Straw triangular; leaves triangular, channelled, leafy; hairs twice the length of the spike.——Root creeping: straw a foot high: leaves linear, triangular, recurved: spikes three or four, nearly erect, longer than their bractea, black. Perennial: flowers in July: found in boggy places on Ben Lawers and the Clova mountains, by G. Don. *Eng. Bot.* vol. xxxiv. pl. 2402. *Engl. Fl.* vol. i. p. 70.

12. NA'RDUS.

Calyx none. Corolla of two lance-shaped pointed husks, the outer embracing the inner. Filaments hair-like. Anther oblong. Germen superior, oblong, small. Style thread-shaped, long. Stigma feathery. Seed one, long and narrow, pointed at both ends, invested with the husks.

N. stric'ta. Mat-grass. Spike slender, straight, the flowers pointing in one direction.——Root consisting of very long, tough, downy fibres: stems numerous, about six inches high, wiry: leaves bristle-like: numerous broad stiff sheaths around the base of the stems. This grass forms dense tufts, and is of a pale green colour. Perennial: flowers in June and July: grows on heaths, generally in sandy or gravelly soil; abundant.

DIGYNIA.

13. PHA'LARIS.

Calyx one-flowered, of two nearly equal, keeled, compressed, acute chaff-scales. Corolla double, concealed by the calyx, of three or four husks, the two inner larger, downy. Nectaries two equal, egg-shaped

scales. Filaments thread-like. Anthers oblong. Styles short, with feathery stigmas. Seed egg-shaped, invested by the hardened internal husks.

P. canariénsis. Canary Grass. Panicle egg-shaped, close; chaff-scales keeled, hairy; outer corolla of two bare husks.——About eighteen inches high: straw erect, striated, roughish: leaves lance-shaped, soft: panicle erect, compound, resembling an egg-shaped spike, beautifully variegated with green and white: this is a foreign species, the seeds of which, accidentally dropped, sometimes spring up in waste places and upon dunghills. Annual: flowers in July. *Engl. Bot.* vol. xix. pl. 1310. *Engl. Fl.* vol. i. p. 75. *Fl. Scot.* p. 23.

P. arundinácea. Reed Canary Grass. Panicle erect, loose; outer husks bearded.——Roots creeping, sending out large fibres: straws from three to five feet high: leaves lance-shaped, striated, smooth: panicle about six inches long, tinged with purple: chaff-scales acute, keeled, with a nerve on each side, rough on the keel and nerves: outer husks minute, each terminated by a tuft of hairs. Perennial: flowers in July: grows by the edges of rivers; common. This plant has altogether the appearance of an Arundo; a variety with striped leaves, is common in gardens. *Engl. Bot.* vol. vi. pl. 402. and vol. xxx. pl. 2160. f. 2. *Engl. Fl.* vol. i. p. 75. *Fl. Scot.* p. 33.

14. PHLE'UM.

Calyx one-flowered, of two nearly equal, compressed, pointed or awned chaff-scales. Corolla of two concealed, unequal husks, the outer embracing the inner. Filaments hair-like. Anthers linear, protruded. Germen roundish. Styles thread-like, spreading. Stigmas feathery. Seed oblong, loose.

P. praténse. Common Cat's-tail-grass. Timothy Grass. Panicle spiked, cylindrical; chaff-scales abrupt, fringed on the keel, longer than the awn.——Root fibrous: straws from two to three feet high, knotty, erect: leaves linear, flat, rough, with long sheaths: panicle erect, very close, spiked, of a cylindrical form, from two to four inches long, green: the roots are sometimes bulbous. Perennial: flowers in the summer months: grows in meadows and pastures; common. *Engl. Bot.* vol. xv. pl. 1078. *Engl. Fl.* vol. i. p. 76. *Fl. Scot.* p. 28.

P. alpínum. Alpine Cat's-tail-grass. Panicle spiked, between egg-shaped and oblong; chaff-scales abrupt, fringed on the keel, as long as the awns; root knotted.——Straw ascending, from six to twelve inches long, smooth: spiked panicle about an inch in length. Perennial: flowers in July: grows on some of the higher mountains of Scotland, as Ben Lawers; rare. *Engl. Bot.* vol. xv. pl. 1077. *Engl. Fl.* vol. i. p. 77. *Fl. Scot.* p. 23.

P. Michélii. Michelian Cat's-tail-grass. Panicle spiked, cylindrical; chaff-scales lance-shaped, pointed, fringed on the keel.——Roots fibrous: straws from one to two feet high, leafy: leaves flat, rough on the edges: panicle close, about two inches long. Perennial: flowers in July: grows on rocky parts of the Clova mountains. G. Don. *Engl. Bot.* vol. xxxii. pl. 2265. *Engl. Fl.* p. 78. *Fl. Scot.* p. 24.

P. aspérum. Branched Cat's-tail-grass. Panicle spiked, cylindrical;

chaff-scales wedge-shaped, pointed, rough, with a bare keel.——Root fibrous: straw about a foot high, branched, smooth: leaves roughish, pointed, erect: panicles terminal, erect, cylindrical, about two inches long. Annual: flowers in July: grows in dry fields; rare. Near Bristol; on Newmarket Heath; in Badmington Park, Gloucestershire; in Bedfordshire, &c. *Engl. Bot.* vol. xv. pl. 1077. *Engl. Fl.* vol. i. p. 77.

P. Boéhmeri. Purple-stalked Cat's-tail-grass. Panicle spiked, cylindrical; chaff-scales lance-shaped, pointed, slightly hairy; straw simple.——Roots fibrous: straws about a foot high, erect, purple: chaff-scales purple. Perennial: flowers in July: grows in dry fields; rare. *Engl. Bot.* vol. vii. pl. 459. *Engl. Fl.* vol. i. p. 78.

P. arenárium. Sea-side Cat's-tail-grass. Panicle spiked, oblong, enlarged at the top; chaff-scales lance-shaped, fringed.——Root fibrous: straws about six inches high, leafy below: spiked panicle short, enlarged above: husks half the length of the chaff-scales. Perennial: flowers in July: grows in sand on the sea-shore. *Engl. Bot.* vol. iv. pl. 222. *Engl. Fl.* vol. i. p. 79.

15. ALOPECU'RUS.

Calyx one-flowered, of two, nearly equal, egg-shaped, ribbed, chaff-scales. Corolla of one, concave, egg-shaped husk. Awn twice as long as the husk, and arising from its base. Filaments hair-like. Anthers forked at each end. Germen roundish. Styles hair-like, united at the base. Stigmas long, feathery. Seed egg-shaped, loose, covered by the husk.

A. praténsis. Meadow Fox-tail-grass. Straw erect, smooth; panicle spiked, cylindrical; chaff-scales acute, hairy, shorter than the awn of the husk.——Root fibrous: straws about two feet high: leaves flat, nearly smooth: spiked panicle about two inches long, hoary. Perennial: flowers in May: grows in meadows and pastures; common. *Engl. Bot.* vol. xi. pl. 759. *Engl. Fl.* vol. i. p. 80. *Fl. Scot.* p. 21.

A. alpínus. Alpine Fox-tail-grass. Straw erect, smooth; panicle spiked, egg-shaped; chaff-scales obliquely abrupt, hairy; awn a little longer than the husk.——Root creeping: straw about a foot high, erect smooth: root leaves narrow, the other broader: spiked panicle hardly an inch long: chaff-scales united at the base, three-ribbed, covered with long, close, white hairs. Perennial: flowers in July: grows on some of the highest mountains of Scotland. Discovered by Mr. R. Brown on Lochna-gar, in Aberdeenshire. *Engl. Bot.* vol. xvi. pl. 1126. *Engl. Bot.* vol. i. p. 81. *Fl. Scot.* p. 22.

A. agréstis. Slender Fox-tail-grass. Straw erect, roughish above; panicle spiked, cylindrical, tapering at the end; chaff-scales acute, nearly bare; awn twice the length of the calyx.——Root fibrous: straws about two feet high: leaves rough above: spike slender, three inches long, purplish: chaff-scales lance-shaped. Annual: flowers in July: grows in cultivated fields, and by way-sides. *Engl. Bot.* vol. xii. pl. 848. *Eng. Fl.* vol. i. p. 81. *Fl. Scot.* p. 22.

A. bulbósus. Bulbous Fox-tail-grass. Straw erect; spike simple; chaff-scales separate, linear, acute, downy; root bulbous.——Root

bulbous: straws erect, smooth: leaves narrow, striated: spike dark-green: chaff-scales narrow, with the keel and ribs fringed: husk blunt-ish, its awn twice the length of the calyx. Perennial: flowers in July: grows in salt marshes; near Yarmouth, and Weymouth. *Engl. Bot.* vol. xviii. pl. 1249. *Engl. Fl.* vol. i. p. 82.

A. geniculátus. Floating Fox-tail-grass. Straw ascending, bent at the joint; panicle spiked, cylindrical; chaff-scales united at the base, abrupt, fringed.——Root fibrous: straw decumbent at the base: leaves broader and shorter than in the last: spikes an inch and a-half long: chaff-scales obtuse, purple, strongly fringed on the keel: husk abrupt, shorter than the calyx: awn twice the length of the calyx. Perennial: flowers in June and July: grows in ditches and watery places; common. *Engl. Bot.* vol. xviii. pl. 1250. *Engl. Fl.* vol. i. p. 83. *Fl. Sect.* p. 22.

16. KNA'PPIA.

Calyx one-flowered, of two nearly equal, keeled, egg-shaped, abrupt, awnless chaff-scales. Corolla of two unequal, inversely egg-shaped membranous, hairy, fringed, awnless husks, shorter than the calyx. Filaments hair-like, twice the length of the calyx. Anthers oblong, cleft at both ends. Germen minute, roundish. Styles short. Stigmas long, cylindrical, acute, downy. Seed loose, egg-shaped, covered by the husks.

R. agrostidéa. Early Knappia.——Root fibrous: stems from one to three inches high, erect, slender, triangular: leaves short, channelled, at the base of the stem: flowers purplish, nearly sessile. Annual; flowers in March and April: grows in sandy pastures by the sea-shore; rare. *Engl. Bot.* vol. xvi. pl. 1127. *Engl. Fl.* vol. i. p. 84.

17. POLYPO'GON.

Calyx one-flowered, of two nearly equal, keeled, cleft chaff-scales, each with a terminal awn. Corolla of two egg-shaped husks, inclosed within the calyx; the outer keeled and awned. Filaments hair-like, as long as the corolla. Anthers oblong, cleft at both ends. Germen oval, Styles short, distinct. Stigmas feathery. Seed loose, egg-shaped, covered by the husks.

P. monspeliénsis. Annual Beard-grass. Awns straight, thrice the length of the calyx; root fibrous.——Straws a foot high, simple, smooth: leaves flat, acute, striated, rough on the edges and ribs: panicle pale. Annual: flowers in July and August: grows in moist pastures, in Hampshire, Essex and Norfolk; rare. *Engl. Bot.* vol. xxiv. pl. 1704. *Engl. Fl.* vol. i. p. 86.

A. littordlis. Perennial Beard-grass. Awns straight, about the length of the calyx; root creeping.——Straws about a foot high, branched, smooth: leaves rough on both sides and on the edges: panicle purplish. Perennial: flowers in July and August: grows in salt marshes, in Norfolk and Essex; rare. *Engl. Bot.* vol. xviii. pl. 1251. *Engl. Fl.* vol. i. p. 87.

18. MI'LIUM.

Calyx one-flowered, of two unequal, egg-shaped, tapering, awnless

chaff-scales. Corolla of two unequal, egg-shaped husks, inclosed within the calyx, the outermost sometimes awned on the back. Nectaries membranous, cleft. Filaments hair-like, very short. Germen egg-shaped. Styles united, or very short. Seed egg-shaped, covered with the hardened husks.

M. effúsum. Spreading Millet-grass. Flowers awnless, in a loose, spreading panicle.——Root fibrous: straws about four feet high, slender, smooth: leaves broad, flat, bright green: panicle large, widely-spreading. Perennial: flowers in June and July: grows in moist shady places: frequent. *Engl. Bot.* vol. xvi. pl. 1106. *Engl. Fl.* vol. i. p. 87. *Fl. Scot.* p. 24.

M. lendigerum. Panick Millet-grass. Flowers awned, in a dense, spiked panicle.——Root fibrous: panicle erect, very close, tapering, pale-green. Annual: flowers in August: grows in moist meadows, in England; not common. *Engl. Bot.* vol. xvi. pl. 1107. *Engl. Fl.* vol. i. p. 88.

19. AGRO'STIS.

Calyx of two unequal, acute, keeled, awnless, permanent chaff-scales, containing one flower. Corolla of two unequal, membranous, ribbed husks, tufted with hairs at the base, the larger frequently bearing an awn. Nectaries two minute scales. Filaments hair-like, rather longer than the husks. Anthers deeply divided at each end. Germen egg-shaped. Styles short. Stigma densely hairy. Seed egg-shaped, shining, loose, enveloped in the unaltered corolla.

* *Awned.*

A. Spica-vénti. Silky Bent-grass. Awn straight, stiff, many times longer than the corolla; panicle loosely spreading.——Stem two or three feet high, erect, smooth: leaves ribbed, spreading: panicle large, silky-looking: outer husk rough with tubercles, inner cleft at the point. Annual: flowers in June and July: grows in sandy fields, in England. *Eng. Bot.* vol. xiv. pl. 951. *Engl. Fl.* vol. i. p. 89.

A. canina. Brown Bent-grass. Awn arising from below the middle of the husk, curved inwards, twice the length of the husk; stems decumbent, with prostrate shoots; stipules lance-shaped. —— Root creeping: straws more or less decumbent and rooting at the base, about two feet long, slender, smooth: leaves roughish on both sides: panicle spreading when in flower, with thread-like, angular, rough branches. Perennial: flowers in June and July: grows in meadows and pastures; common. *Engl. Bot.* vol. xxvi. pl. 1856. *Engl. Fl.* vol. i. p. 90. *Fl. Scot.* p. 24.

A. setácea. Bristle-leaved Bent-grass. Awn from near the base of the husk, curved inwards; chaff-scales lance-shaped, tapering, rough; root-leaves bristle-shaped; straw nearly erect; panicle close.——Root tufted: stems about a foot high, slender, smooth: stipules lance-shaped: panicles cylindrical, with angular, bristly branches: inner husk very small. Perennial: flowers in July and August: grows on dry heaths in the south of England. *Engl. Bot.* vol. xvii. pl. 1188. *Engl. Fl.* vol. i. p. 91. *Brit. Fl.* p. 33.

** *Generally Awnless.*

A vulgáris. Fine Bent-grass. Panicle spreading, with smooth, divaricated hair-like branches; chaff-scales nearly equal; straw erect; stipules very short, abrupt.——Root creeping: straws about a foot high: panicle smooth, with purplish flowers. Perennial: flowers in July and August: grows in meadows and pastures; common. *Engl. Bot.* xxiv. pl. 1671. *Engl. Fl.* vol. i. p. 92. *Fl. Scot.* p. 25.

A. álba. Marsh Bent-grass. Panicle spreading, with rough branches; chaff-scales lance-shaped, bristly on the keel; straw oblique, creeping in its lower part; stipules oblong.——Root and stems creeping, and sending out long prostrate shoots: panicle at length spreading, with tufted branches, and green or purple flowers. Perennial: flowers in June and July: grows in moist meadows and places inundated in winter, and on the other hand frequently in dry sand, exhibiting great diversity of appearance. This is the famous Fiorin-grass of agriculturists. It hardly deserves the notice which it has received. Wild geese and ducks are fond of its juicy stems and roots, which have a sweet taste. *Engl. Bot.* vol. xvii. pl. 1189, and vol. xxii. pl. 1532. *Engl. Fl.* vol. i. p. 93. *Fl. Scot.* p. 25.

20. CY'NODON.

Calyx of two nearly equal, lance-shaped, acute, keeled, awnless scales, containing a single flower. Corolla of two unequal, keeled, compressed, awnless husks, the outer much broader and embracing the other. Nectary of two minute scales. Filaments rather longer than the husks. Anthers cleft at both ends. Germen egg-shaped. Styles distinct. Stigma feathery. Seed egg-shaped, invested by the hardened husks.

C. Dáctylon. Creeping Dog's-tooth-grass. Spikes four or five, crowded; husks smooth.——Root creeping, rough: straws creeping, round, smooth: leaves tapering, hairy, with long, smooth sheaths: flowering branches about six inches high, each bearing four or five linear spikes. Perennial: flowers in July and August: grows on the sandy shores of Cornwall. *Engl. Bot.* vol. xii. pl. 850. *Engl. Fl.* vol. i. p. 95.

21. DIGITA'RIA.

Calyx one-flowered, of three very unequal, awnless scales; the outer minute, triangular; the next largest, as long as the corolla; the inner opposite to the latter, small, lance-shaped. Corolla of two unequal, elliptical, awnless valves. Filaments hair-like, rather longer than the husks. Anthers short, cleft at both ends. Germen egg-shaped. Styles thread-shaped, about the length of the stamens. Stigmas short, feathery. Seed egg-shaped, closely invested by the hardened polished husks.

D. sanguinális. Cock's-foot Finger-grass. Leaves and their sheaths somewhat hairy; flowers in pairs; calyx rough at the edges of its larger scale only.——Root fibrous: stems decumbent and rooting at the base, about a foot long, striated, smooth: leaves broad, pointed, striated, sprinkled with warts: spikes from three to eight, crowded at

the top of the straw: flowers dark purple, erect: larger chaff-scale five-ribbed, with rough edges. Annual: flowers in July and August: grows in various parts of England, in sandy cultivated fields; rare. *Eng. Bot.* vol. xii. pl. 849; *Panicum sanguinale. Eng. Fl.* vol. i. p. 97.

22. PA'NICUM.

Calyx two-flowered, of two very unequal, ribbed chaff-scales, the inner much larger, elliptical, generally awnless. One flower perfect; the other either neutral, or stameniferous. Corolla of the former of two unequal, membranous, acute husks; in the latter of one or two husks, the outer of the texture of the calyx, concave ribbed, sometimes awned, the inner flat, awnless, often wanting. Filaments hair-like, as long as the corolla. Anthers short, cleft at both ends. Germen egg-shaped. Styles distinct, awl-shaped, as long as the stamens. Stigmas feathery, short. Seed egg-shaped, flattened on one side, closely invested with the hardened husks.

P. verticillátum. Rough Panick-grass. Panicle spiked, cylindrical, lobed with whorled branches; flowers in pairs, accompanied with angular bristles, rough with reversed teeth.——Root fibrous: stems two feet high, smooth, spreading: leaves lance-shaped, rough on both sides, with long smooth sheaths: stipules of numerous short hairs: calyx pale with green ribs, smooth: husks minutely wrinkled. Annual: flowers in July and August: grows in corn-fields in England; rare. *Engl. Bot.* vol. xiii. pl. 874. *Engl. Fl.* vol. i. p. 98.

P. víride. Green Panick-grass. Panicle spiked, cylindrical, continuous, with numerous prominent bristles, rough with erect teeth.—— Smaller than the last, but closely resembling it, the principal difference lying in the more numerous bristles with teeth directed upwards. Annual: flowers in July and August: grows in sandy fields in some parts of England; rare. *Engl. Bot.* vol. xiii. pl. 875. *Engl. Fl.* vol. i. p. 99.

P. Crus-galli. Loose-Panick-grass. Panicle erect, branched, bristly; flowers awned, unilateral; leaves lance-shaped, harsh, destitute of stipules.——Root fibrous: stems about a foot high, smooth: leaves pointed: panicle erect, stiff, unilateral, with angular roughed-edged stalks. Annual: flowers in July and August: grows in wet corn-fields, in England; rare. *Engl. Bot.* vol. xiii. pl. 876. *Engl. Fl.* vol. i. p. 100.

23. AI'RA.

Calyx of two unequal, keeled chaff-scales, containing two perfect flowers, without rudiments of a third. Corolla of two oblong, unequal husks, the outer larger, generally with a twisted awn arising from above the base, the inner notched and awnless. Nectary a cleft scale. Filaments hair-like. Anthers protruded, pendulous, notched at both ends. Germen egg-shaped. Styles short, distinct. Stigma large, feathery. Seed egg-shaped, loose, covered with the membranous husks.

* *Corolla awnless.*

A. cristáta. Crested Hair-grass. Panicle dense; calyx longer than its stalk, shorter than the flowers; chaff-scales and husks pointed.——

Root in dense tufts with downy fibres: stems erect, about nine inches high: panicle close, lance-shaped, with silvery, purplish, erect flowers. Perennial: flowers in July and August: grows in dry pastures; common. *Engl. Bot.* vol. ix. pl. 648. *Engl. Fl.* vol. i, p. 101. *Fl. Scot.* p. 29.

A. aquática. Water Hair-grass. Panicle spreading; flowers awnless, even, obtuse, longer than the calyx; leaves flat; stipule oblong. ——Root creeping: stems floating, branched, smooth, rising about a foot above the water: panicle erect, with spreading branches. Perennial: flowers in June: grows in ditches, pools, and the edges of rivers; not uncommon. *Engl. Bot.* vol. xxii. pl. 1557. *Engl. Fl.* vol. i. p. 102. *Fl. Scot.* p. 29.

** *Corolla awned.*

A. cæspitósa. Turfy Hair-grass. Panicle spreading; flowers about the length of the calyx, abrupt, hairy at the base; awn short, from the base of the outer husk; leaves flat.——Straws from two to four feet high, erect, smooth, growing in large tufts: panicle large, much branched, with small silvery purplish flowers. Perennial: flowers in June and July: grows in moist shady places; common. *Engl. Bot.* vol. xxi. pl. 1453. *Engl. Fl.* vol. i. p. 102.

A. alpina. Smooth Alpine Hair-grass. Panicle rather close, with smooth branches; flowers acute, the length of the calyx; awn short, from near the top of the outer husk; leaves involute.——Straws about a foot high: leaves rough on the upper side: panicle with shining brownish flowers, on nearly erect branches. Perennial: flowers in July: grows on some of the higher mountains of Scotland. *Eng. Bot.* vol. xxx. pl. 2102: *A. lævigata. Engl. Fl.* vol. i. p. 103. *Fl. Scot.* p. 30.

A. flexuósa. Panicle spreading, with waved branches; flowers acute, as long as the calyx; awn from the middle of the outer husk, twisted; leaves bristle-shaped.——Straw upwards of a foot high, erect, smooth: leaves short: panicle erect, with waved, angular branches and flower-stalks, and shining brown flowers. Perennial: flowers in July: grows in heathy places and on dry banks; common. *Engl. Bot.* vol. xxii. pl. 1519. *Engl. Fl.* vol. i. p. 104. *Fl. Scot.* p. 30.

A. canéscens. Grey Hair-grass. Panicle rather close; flowers shorter than the calyx; awn short, club-shaped; leaves bristle-shaped.——Straws about six inches high: leaves numerous, chiefly radical, forming dense tufts: panicle with numerous small flowers variegated with purple, green and white. Perennial: flowers in July: grows on the sandy coasts of Norfolk and Suffolk. *Engl. Bot.* vol. xvii. pl. 1190. *Engl. Fl.* vol. i. p. 105.

A. caryophyl'lea. Silver Hair-grass. Panicle spreading; flowers sessile, not longer than the calyx; awn from below the middle of the husk, twice its length; leaves bristle-shaped.——Generally about six inches high: panicle three-forked, with silvery flowers. Annual: flowers in June and July: grows in dry pastures and gravel pits; common. *Engl. Bot.* vol. xii. pl. 812. *Eng. Fl.* vol. i. p. 107. *Fl. Scot.* p. 30.

A. præcox. Early Hair-grass. Panicle close, erect; flowers sessile, as long as the calyx; awn from the base of the husk, nearly twice its length; leaves bristle-shaped.——Straws from two to five inches high: panicle with angular rough branches, and pale, purplish flowers. This

and the preceding species wither very soon, when the season is dry. Perennial: flowers in May and June: grows in dry sandy pastures; common. *Engl. Bot.* vol. xviii. pl. 1296. *Engl. Fl.* vol. i. p. 106. *Fl. Scot.* p. 30.

24. ARU'NDO.

Calyx of two unequal, lance-shaped, pointed, keeled, awnless chaff-scales. Corolla of two unequal husks; the outer larger, lance-shaped, keeled, compressed, pointed; the inner cleft at the point, inflected at the edges; each husk with numerous, soft hairs at the base. Nectary of two minute scales. Filaments thread-like. Anthers cleft at both ends. Germen oblong. Styles short. Stigmas feathery. Seed oblong, loose, but enveloped in the husks.

A. Phragmites. Common Reed. Flowers about five in each calyx, awnless; panicle loose.——Root creeping: stems about six feet high, stout, smooth: leaves lance-shaped, rough on the edges, many-ribbed: panicle very large with the branches in half whorls: flowers brownish purple, with large tufts of silky hairs. Perennial: flowers in July: grows in ditches, marshes, lakes, and rivers: not very common, but often growing in large masses. It forms excellent thatch. *Engl. Bot.* vol. vi. pl. 401. *Engl. Fl.* vol. i. p. 169. *Fl. Scot.* p. 27.

A. Epigejos. Wood Reed. Calyx one-flowered, longer than the corolla; panicle erect, close, with crowded, unilateral flowers; awn of the outer husk dorsal, as long as the hairs and calyx; leaves lance-shaped. ——Straw about three feet high: panicle smaller, closer, and more erect than in the last: flowers purple, with long silky hairs. Perennial: flowers in July: grows in shady moist places; rare. *Engl. Bot.* vol. vi. pl. 403. *Engl. Fl.* vol. i. p. 170. *Fl. Scot.* p. 27: *A. calamagrostis.*

A. Calamagróstis. Small Reed. Calyx one-flowered, much longer than the corolla; panicle erect, loose; flowers spreading in all directions; awn terminal, short; hairs longer than the husks; leaves linear.——Straws about three feet high, smooth, slender: panicle much branched, with purple flowers. Perennial: flowers in July: grows in marshes, and moist woods and hedges. *Engl. Bot.* vol. xxx. pl. 2159. *Engl. Fl.* vol. i. p. 170.

A. stricta. Smallest Close Reed. Calyx one-flowered, egg-shaped, acute, scarcely longer than the husks; panicle erect, close; flowers spreading in all directions, with a dorsal awn; hairs shorter than the husks.——Straw about two feet high, very slender, smooth: flowers brown, with the hair short. Perennial: flowers in June: found by Mr. G. Don in the White Mire near Forfar. *Engl. Bot.* vol. xxx. pl. 2150. *Engl. Fl.* vol. i. p. 171. *Fl. Scot.* p. 27.

A. arenária. Sea Reed. Mat-grass. Sea Bent. Calyx one-flowered, a little longer than the corolla; panicle close; leaves involute, pungent.——Root creeping, often twenty feet long; straw stiff, greenish-yellow: leaves very long, mostly radical: panicle close, linear, attenuated at each end: chaff-scales, unequal, membranous, rough on the keel. Very few of the seeds are perfected. This plant is common on the coasts, wherever there is loose sand, which it serves

to bind down by its long tough roots. It is manufactured into door mats and floor brushes. In the Hebrides it is made into ropes for various uses; mats for pack-saddles, bags and vessels for holding and preparing meal and grain, and into hats. It has also been planted in the outer Hebrides for curing sand-drift. Perennial: flowers in July. *Engl. Bot.* vol. viii. pl. 520. *Engl. Fl.* vol. i. p. 172. *Fl. Scot.* p. 27.

25. HO'LCUS.

Calyx, two-flowered, of two unequal, keeled, awnless, chaff-scales, one of the flowers perfect, the other with an abortive germen. Corolla of two equal husks; the larger egg-shaped, keeled, awned on the back; the smaller much narrower, awnless. Nectary a cleft scale. Filaments three in both flowers. Anthers notched at both ends. Styles short, spreading. Stigma large, feathery. Seed coated with the hardened permanent husks.

H. avenáceus. Oat-like Soft-grass. The perfect flower superior, with a short awn, the imperfect flower with a long geniculate awn; root knotted.——Height from two to four feet, or more: the lower part of the straw has a number of very short joints, which are enlarged above, forming yellowish juicy knots, resembling roots: leaves narrow lance-shaped, thinly hairy above: panicle long, with half-whorled branches: imperfect flower with a long awn, bent near the middle, inserted above the base; perfect flower with a short awn, inserted below the tip. Perennial: flowers in July and August: grows by roads and old walls, and in corn fields, where it is difficult to be extirpated. In many districts it is so abundant, that the farmers collect the roots into heaps and burn them. *Engl. Bot.* vol. xii. pl. 813. *Engl. Fl.* vol. i. p. 109. *Fl. Scot.* p. 28.

H. móllis. Creeping Soft-grass. Perfect flower inferior, awnless; imperfect flower with a bent awn exceeding the calyx; root creeping.——Straw about three feet high, generally smooth, with the knots downy: leaves narrow lance-shaped, acute, smoothish, or slightly downy, rough at the margin: chaff-scales, nearly equal, smoothish, hairy on the keel: flowers shining, the upper hairy at the base. Perennial: flowers in July: grows in moist pastures, and by old walls. *Engl. Bot.* vol. xvii. pl. 1170. *Engl. Fl.* vol. i. p. 108. *Fl. Scot.* p. 28.

H. lanátus. Meadow Soft-grass. Perfect flower inferior, awnless; imperfect flower with a curved awn included in the calyx; root fibrous. ——Straw about two feet high: the whole plant, particularly the leaves, covered with a very soft short down: chaff-scales nearly equal, downy: flowers shining, the upper with a tuft of hairs at the base. The principal difference between this and the last is in the length of the awn. Perennial: flowers in July: grows in meadows, pastures and woods, and by roads; abundant. *Engl. Bot.* vol. xvii. pl. 1169. *Engl. Fl.* vol. i. p. 108. *Fl. Scot.* p. 28.

26. ME'LICA.

Calyx of two unequal, spreading, awnless chaff-scales, containing one or two perfect flowers, with the rudiments of one or two other flowers. *Corolla of two unequal*, oblong, awnless husks; the outer

larger, concave, ribbed; the inner flat, with two marginal ribs. Nectary cup-shaped, at the base of the germen. Filaments hair-like. Anthers protruded, pendulous. Germen roundish. Styles distant, long. Stigmas short. Seed egg-shaped, loose, covered with the hardened husks.

M. uniflóra. Wood Melick-grass. Panicle branched, slightly drooping toward one side; flowers erect; spikelet with only one perfect flower.——Root creeping: straw about eighteen inches high, smooth, slender: leaves with the ribs and edges rough: panicle of a few hair-like branches: flowers variegated with white, green, and brown. Perennial: flowers in May and June: grows in woods; not uncommon. *Engl. Bot.* vol. xv. pl. 1058. *Engl. Fl.* vol. i. p. 112. *Fl. Scot.* p. 31.

M. nútans. Mountain Melick-grass. Panicle close, nearly simple, drooping; flowers pendulous; spikelet with two perfect flowers.——Root creeping: straw about a foot high: leaves nearly smooth: panicle generally with undivided branches. Perennial: flowers in June and July: grows in woods. *Engl. Bot.* vol. xv. pl. 1059. *Engl. Fl.* vol. i. p. 113. *Fl. Scot.* p. 31.

M. cærúlea. Purple Melick-grass. Panicle close, erect; spikelets cylindrical, erect.——Root large, of numerous long, thick fibres: straw about two feet high, enlarged at the base: leaves covered with scattered hairs above: panicle oblong, with numerous waved branches, and purplish brown flowers. This grass is made into ropes in the Hebrides. The butter of cows which feed upon it is very rich, and highly coloured. Perennial: flowers in June and July: grows abundantly on heaths, especially such as are moist. *Engl. Bot.* vol. xi. pl. 750. *Eng. Fl.* vol. i. p. 113. *Fl. Scot.* p. 31.

27. SESLE'RIA.

Calyx of two nearly equal, pointed, keeled, slightly awned chaff-scales, containing two or three perfect flowers. Corolla of two lance-shaped, acute husks, the outer toothed, the inner cleft. Filaments hair-like, a little longer than the husks. Anthers protruded, linear, notched at both ends. Germen small, egg-shaped. Styles united. Stigma long, downy. Seed loose, covered with the membranous husks.

S. cærúlea. Blue Moor-grass. Spike egg-shaped, imbricated; bractæas alternate; outer husk with three teeth.——Root of long fibres: straw about eight inches high, smooth: leaves rough on the edges and keel, with short sheaths: spike erect, bluish-grey, shining: chaff-scales and outer husk fringed, the latter with three teeth at the end. Perennial: flowers in April and May: grows on mountains in Scotland and the North of England. *Engl. Bot.* vol. xxiii. pl. 1613. *Engl. Fl.* vol. i. p. 114. *Fl. Scot.* p. 31.

28. HIERO'CHLOE.

Calyx of two nearly equal, egg-shaped, acute, awnless, membranous chaff-scales, containing three flowers, of which the upper is perfect, the others stameniferous. Corolla of two unequal membranous husks: the outer larger, egg-shaped: the inner much narrower, extremely thin,

notched, inflected at the edges. Nectary a membranous scale. Filaments hair-like, two in the perfect flower, three in the barren ones. Anthers linear, protruded, pendulous. Germen egg-shaped. Styles short, distinct. Stigmas linear, feathery. Seed egg-shaped, small, loose, invested by the unaltered husks.

H. borealis. Northern Holy-grass. Panicle somewhat unilateral, with smooth flower-stalks; perfect flower awnless, the others slightly awned; leaves flat.——Root creeping: straws from twelve to eighteen inches high, erect, smooth: panicle erect, with waved branches: outer husks fringed. Perennial: flowers in May and June: found by Mr. G. Don in the valley of Kella in Angus-shire. *Engl. Fl.* vol. i. p. 111. *Fl. Scot.* p. 28.

29. GLYCE'RIA.

Calyx of two unequal, awnless chaff-scales, containing a linear spikelet of numerous, alternate, two-rowed awnless flowers, unconnected by a web at the base. Corolla of two unequal husks; the outer cylindrical, ribbed, entire, more or less abrupt, with inflected edges; the inner narrower, obtuse or notched, flat, membranous, with two marginal ribs. Nectary a notched scale. Filaments hair-like, longer than the corolla. Anthers pendulous, linear, cleft at both ends. Germen egg-shaped. Styles distinct. Stigmas spreading, feathery, repeatedly branched. Seed oblong, loose, covered with the unaltered husks.

G. aquática. Reedy Sweet-grass. Panicle erect, repeatedly branched, spreading; spikelets with numerous, obtuse, seven-ribbed flowers.——Straw six feet high, stout: leaves broad, flat, rough on the keel and edges: panicle large, with half-whorled branches: spikelets of from five to ten flowers. This is one of the most beautiful as well as one of the largest of our grasses. It is eaten by cattle, and deserves to be cultivated, as it would yield an abundant crop in moist land. Perennial: flowers in July: grows by the margin of rivers. *Engl. Bot.* vol. xix. pl. 1315. *Engl. Fl.* vol. i. p. 116. *Fl. Scot.* p. 32; *Poa aquatica.*

G. flúitans. Floating Sweet-grass. Panicle slender, very long, slightly branched; spikelets with numerous obtuse, seven-ribbed cylindrical flowers.——Root creeping, long: straws partly floating, as are many of the linear, flat, obtuse leaves: panicle nearly erect, narrow, with roughish branches: spikelets erect, long, linear, of from eight to twelve flowers: outer husk cylindrical, obtuse. Perennial: flowers in June and July: grows in ditches and stagnant waters; common. *Engl. Bot.* vol. xxii. pl. 1520. *Engl. Fl.* vol. i. p. 117. *Fl. Scot.* p. 32: *Poa fluitans.*

G. maritima. Creeping Sea-sweet-grass. Panicle branched, rather close; spikelets, with about five, slightly five-ribbed, somewhat pointed flowers; root creeping.——Stems about a foot high: leaves involute, pointed: flowers cylindrical, hairy at the base. Perennial: flowers in July and August: grows on the sea-coast. *Engl. Bot.* vol. xvi. pl. 1140. *Engl. Fl.* vol. i. p. 116. *Fl. Scot.* p. 33: *Poa maritima.*

G. distans. Reflexed Sweet-grass. Panicle branched, spreading; spikelets with about five, obscurely five-ribbed, blunt, shining flowers; root fibrous.——Straws about a foot high, decumbent at the base: the whole plant slightly glaucous: panicle erect, with half-whorled, rough branches:

flowers cylindrical. Perennial: flowers in July and August: grows near the coast in sandy pastures. *Engl. Bot.* vol. xiv. pl. 986. *Engl. Fl.* vol. i. p. 118. *Fl. Scot.* p. 33: *Poa distans.*

G. procúmbens. Panicle lance-shaped, two-rowed, unilateral, close, with rough stalks; spikelets of five, bluntish, five-ribbed flowers.——Root fibrous: the whole plant glaucous: straws about eight inches long, procumbent: outer husk cylindrical, its central rib more prominent towards the summit: inner husk bristly at the lateral ribs. Perennial: flowers in July and August: grows in pastures near the sea. *Engl. Bot.* vol. viii. pl. 532. *Engl. Fl.* vol. i. p. 119. *Fl. Scot.* p. 32. *Poa procumbens.*

G. rígida. Hard-sweet-grass. Panicle lance-shaped, close, two-rowed, unilateral, with smooth stalks; spikelets of about seven acute, scarcely-ribbed flowers.——Root fibrous: stems from three to eight inches high, extremely stiff and firm: flowers cylindrical, slightly keeled: the whole plant generally brownish. Perennial: flowers in June: grows in dry gravelly places, and on walls; not uncommon. *Engl. Bot.* vol. xx. pl. 1371. *Engl. Fl.* vol. i. p. 120. *Fl. Scot.* p. 33: *Poa rigida.*

30. PO'A.

Calyx of two unequal, egg-shaped, acute, keeled, awnless, chaff-scales, containing an egg-shaped spikelet of two-rowed, imbricated, awnless, perfect flowers, frequently connected at the base by a web of white cottony filaments. Corolla of two unequal husks; the outer egg-shaped, acute, keeled, compressed, entire, membranous at the edges; the inner narrower, with two nearly marginal ribs, inflected membranous edges, and a cleft summit. Nectary a deeply-cleft scale. Filaments hair-like, longer than the corolla. Anthers pendulous, oblong, cleft at both ends. Germen egg-shaped. Styles very short. Stigmas feathery, spreading. Seed oblong, acute, loose, covered with the unaltered husks.

P. compréssa. Flat-stalked Meadow-grass. Panicle somewhat unilateral, spreading; straw compressed; spikelets oblong; flowers connected by a web; root creeping.——Straw decumbent at the base, about a foot high: panicle with rough angular branches: spikelets from three to eight flowers: outer husk five-ribbed, rough on the keel. Perennial: flowers in June, July, and August: grows in waste ground, and on walls: not uncommon. *Engl. Bot.* vol. vi. pl. 365. *Engl. Fl.* vol. i. p. 121. *Fl. Scot.* p. 34.

P. alpina. Alpine Meadow-grass. Panicle spreading: spikelets egg-shaped, four or five flowered: flowers somewhat incurved, hairy at the base.——Root fibrous: straws from four to eight inches high, erect: leaves linear, flat, bluntish, with a small point, rough at the edges: spikelets broad: chaff-scales keeled, three ribbed: inner husk fringed at the ribs. Perennial: flowers in July and August: grows on the higher mountains of Scotland. *Engl. Bot.* vol. xiv. pl. 1003. *Engl. Fl.* vol. i. p. 122. *Fl. Scot.* p. 34.

P. lánra. Waved Meadow-grass. Panicle drooping, loosely spreading, waved; spikelets egg-shaped, three-flowered; flowers connected by a

web.——Root slightly creeping: the whole plant somewhat glaucous: leaves linear, roughish above: panicle with waved branches: spikelets broad: chaff-scales keeled. Perennial: flowers in July: found by Mr. J. T. Mackay, on Bennevis. *Engl. Fl.* vol. i. p. 123. *Fl. Scot.* p. 34.

P. bulbósa. Bulbous Meadow-grass. Panicle close, slightly waved: spikelets egg-shaped, four-flowered; flowers smoothish, connected by a web; leaves finely serrated; straw bulbous at the base.——Straws four or five inches high: panicle oblong: spikelets egg-shaped: chaff-scales rough on the keel: outer husk hairy on the keel, with a continuation of the web, the inner fringed. Perennial: flowers in April and May: grows on the sandy sea-shore in some parts of England; rare. *Engl. Bot.* vol. xv. pl. 1071. *Engl. Fl.* vol. i. p. 123.

P. triviális. Roughish Meadow-grass. Panicle spreading: spikelets oblong, of about three, acute, five-ribbed flowers, connected by a web; straw and sheaths roughish; root fibrous.——From one to two feet high: leaves linear, acute: panicle large, with half-whorled, rough branches, and green flowers. A valuable grass for pasturage and hay. Perennial: flowers in June and July: grows in meadows and pastures; very common. *Engl. Bot.* vol. xv. pl. 1072. *Engl. Fl.* vol. i. p. 124. *Fl. Scot.* p. 35.

P. pratensis. Smooth Meadow-grass. Panicle spreading; spikelets oblong, of about four, acute, five-ribbed flowers, connected by a web; straw and sheaths smooth; root creeping.——About a foot high: leaves linear, acute: panicle with half-whorled, smooth branches, and pale-green flowers. One of the most valuable pasture plants. Perennial: flowers in June and July: grows in meadows and pastures; abundant. *Engl. Bot.* vol. xv. pl. 1073. *Engl. Fl.* vol. i. p. 126. *Fl. Scot.* p. 35.

P. ánnua. Annual Meadow-grass. Panicle somewhat unilateral, with spreading or deflected branches; spikelets egg-shaped, of about five, somewhat distant, five-ribbed flowers, destitute of a web; straw ascending, a little compressed; root fibrous.——Straws about six inches long, decumbent and rooting at the base: panicle pale-green. The whole plant tender, and rather succulent. Annual: flowers the whole year round: grows by roads, and wherever there is loose earth: abundant. *Engl. Bot.* vol. xvi. pl. 1141. *Engl. Fl.* vol. i. p. 126. *Fl. Scot.* p. 35.

P. glaúca. Glaucous Meadow-grass. Panicle spreading; spikelets egg-shaped, with from two to five, obscurely five-ribbed, bluntish flowers, silky on the keel and lateral ribs, and hairy at the base, without a web.——The whole plant extremely glaucous: straws erect, about a foot high, round: leaves linear, flat, bluntish, roughish: panicle erect, spreading. Perennial: flowers in June and July: grows on the mountains of Scotland, Wales, and the north of England. *Engl. Bot.* vol. xxiv. pl. 1720. *Engl. Fl.* vol. i. p. 128.

P. nemorális. Wood Meadow-grass. Panicle spreading, with hair-like branches; spikelets lance-shaped, of about three five-ribbed, acute flowers, silky on the keel and lateral ribs, and hairy at the base, without a web.——The whole plant slender and delicate: straws erect, about two feet high: leaves linear, flat, tapering to a fine point, roughish: panicle erect. Perennial: flowers in June and July: grows in woods. *Engl. Bot.* vol. xviii. pl. 1265. *Engl. Fl.* vol. i. p. 130.

31. TRIO'DIA.

Calyx of two nearly equal, egg-shaped, keeled, acute, awnless, chaff-scales, containing an egg-shaped, imbricated spikelet, of several perfect flowers, which are hairy at the base, but destitute of web. Corolla of two unequal, egg-shaped, stiff husks; the outer obscurely ribbed, rounded on the back, flat and expanded on the edges, deeply cleft at the summit, with an intermediate short awn or tooth; the inner smaller, fringed, cleft at the point. Nectary of two scales. Filaments hair-like. Anthers protruded, pendulous. Germen oval, flat. Styles short, distinct. Stigma cylindrical, feathery. Seed loose, depressed, convex on the outer, concave on the inner side.

T. decúmbens. Decumbent Heath-grass. Panicle erect, close, with nearly simple branches; spikelets four-flowered; chaff-scales smooth. ——The whole plant stiff, decumbent: straw from four inches to a foot long, smooth: panicle of a few large, purple spikelets: corolla with two dense tufts of shining bristles at the base. Perennial: flowers in July: grows in dry mountainous pastures, as well as on the sea-coasts; not uncommon. *Engl. Bot.* vol. xii. pl. 792. *Engl. Fl.* vol. i. p. 131. *Fl. Scot.* p. 36. *Poa decumbens.*

32. BRI'ZA.

Calyx of two nearly equal, inversely egg-shaped, slightly keeled, awnless chaff-scales, containing a broadly egg-shaped, obtuse, compressed spikelet of many, two-rowed, imbricated, perfect flowers. Corolla of two unequal, obtuse, awnless husks, the outer nearly orbicular, concave, contracted at the edges, the inner much smaller, inversely egg-shaped, inflected at the edges. Nectary a cleft scale. Filaments hair-like, longer than the corolla. Anthers oblong, pendulous. Germen egg-shaped. Styles very short. Stigmas feathery, long. Seed nearly orbicular, flat, closely invested by the husks.

B. média. Common Quaking-grass. Spikelets broadly egg-shaped, seven-flowered; calyx shorter than the flowers.——Straw about a foot high: leaves deep green: panicle with very slender branches, and large purplish, tremulous spikelets: inner husk finely fringed, entire at the end. A very beautiful grass, but of little value to pasturage. Perennial: flowers in June and July: grows in dry pastures. *Engl. Bot.* vol. v. pl. 340. *Engl. Fl.* vol. i. p. 133. *Fl. Scot.* p. 37.

B. mínor. Little Quaking-grass. Spikelets triangular, seven-flowered; calyx longer than the flowers.——Straw about eight inches high: leaves pale green: panicle with hair-like branches: inner husk cleft at the end and not fringed. Perenial: flowers in June and July: grows in cultivated fields in the south of England; very rare. *Engl. Bot.* vol. xix. pl. 1316. *Engl. Fl.* vol. i. p. 133.

33. DA'CTYLIS.

Calyx of two unequal, narrow lance-shaped, keeled, compressed, long-pointed chaff-scales, containing a spikelet of several flowers. Corolla

of two unequal lance shaped, keeled, compressed husks; the outer more or less awned, flat and membranous at the edges; the inner narrower, two-ribbed, folded acutely, cleft at the end. Nectary of two lance-shaped, pointed scales. Filaments hair-like, longer than the corolla. Anthers cleft at both ends. Germen roundish. Styles very short, distinct. Stigmas feathery, spreading. Seed oblong, loose, covered by the unaltered husks.

D. glomerata. Cock's-foot-grass. Panicle distinctly branched, unilateral; flowers in dense tufts; corolla somewhat awned, five-ribbed, taper pointed.——Straw erect, about two feet high: leaves linear, flat, dark green, striated, harsh. A coarse grass, little relished by cattle, but said to improve greatly by culture. Perennial: flowers in June and July: grows by hedges, walls and roads; common. *Engl. Bot.* vol. v. pl. 355. *Engl. Fl.* vol. i. p. 134. *Fl. Scot.* p. 37.

34. SPARTI'NA.

Calyx one-flowered, of two unequal lance-shaped, keeled, compressed chaff-scales; the inner cleft at the end. Corolla of two lance-shaped, bluntish, compressed awnless husks, the inner rather longer. Nectaries none. Filaments hair-like, not so long as the corolla. Anthers erect, linear, cleft at the base. Germen elliptical. Styles united for a great part of their length, separate at the top. Stigmas feathery, slender. Seed oblong, compressed, loose, covered by the unaltered husk.

S. stricta. Twin-spiked Cord-grass. Spikes two or three, with smooth stalks; outer chaff-scale smaller.——Root creeping: the whole plant tough and stiff: straw upwards of a foot high: spikes erect, straight, close together. Perennial: flowers in August: grows in muddy salt marshes, on the east coast of England. *Engl. Bot.* vol. vi. pl. 380. *Engl. Fl.* vol. i. p. 136.

35. CYNOSU'RUS.

Spikelets in pairs: the outer consisting of numerous two-rowed, lance-shaped, pointed, chaff-scales, without corolla or other part of fructification, and resembling a pectinated bractea; the inner of several flowers. Calyx of two equal, lance-shaped, one-ribbed, concave, keeled, taper-pointed, awned chaff scales, containing two or three perfect flowers, occasionally with rudiments of more. Corolla of two unequal, lance-shaped husks; the outer concave, keeled, with a straight awn at the summit; the inner two-ribbed, inflected at the edges, cleft at the point, awnless. Nectary of two acute scales. Filaments hair-like, shorter than the corolla. Anthers linear, cleft at both ends. Germen elliptical. Style very short, distinct. Stigmas long, feathery. Seed loose, oblong, invested by the unaltered husks.

C. cristatus. Crested Dog's-tail-grass. Spike simple, linear; neutral spikelet, awnless.——Straws about a foot high, stiff, smooth: spike erect, linear, with a waved rough stalk. This grass is excellently adapted for making straw-plait, and has been employed for that pur-

pose. Cattle hardly ever eat it. Perennial: flowers in July: grows in meadows and pastures, abundantly. *Engl. Bot.* vol. v. pl. 316. *Engl. Fl.* vol. i. p. 137. *Fl. Scot.* p. 37.

C. echinátus. Rough Dog's-tail-grass. Spike compound, egg-shaped; neutral spikelet awned.——Straws from ten to twenty inches high: spike dense, bristly with the long rough awns of the perfect flowers. Perennial: flowers in July: grows on sandy ground, in the south of England. *Engl. Bot.* vol. xix. pl. 1333. *Engl. Fl.* vol. i. p. 138.

36. FESTU'CA.

Calyx of two very unequal, lance-shaped, pointed chaff-scales, containing an oblong, compressed, imbricated spikelet, of many two-rowed, more or less awned, perfect flowers. Corolla of two unequal husks; the outer commonly nearly cylindrical, entire, pointed or awned, keeled, more or less ribbed, a little inflected at the edges; the inner more narrow, elliptical, two-ribbed, cleft or abrupt, with membranous margins, folded in at the rib. Nectary of one, deeply divided, or of two separate acute scales. Filaments hair-like, shorter than the husks. Anther linear, pendulous, notched at both ends. Germen round. Styles short, distant. Stigmas feathery. Seed oblong, acute, loose, enveloped in the unaltered husks.

F. ovina. Sheep's Fescue. Panicle unilateral, rather close; spikelets of four or five flowers with short awns; straw square; leaves involute, bristle-shaped.——Leaves short, tufted: straws about eight inches high: the whole plant glaucous, frequently tinged with red. This grass forms excellent pasturage for sheep. Perennial: flowers in June and July: grows in dry pastures abundantly. *Engl. Bot.* vol. ix. pl. 585. *Engl. Fl.* vol. i. p. 139. *Fl. Scot.* p. 38.

F. vivípara. Viviparous Fescue. Panicle unilateral, rather close; spikelets of four or five viviparous, compressed, keeled, awnless flowers; straw square; leaves involute, bristle-shaped.——This differs from the last chiefly in the circumstance of being viviparous. Perennial: flowers in June and July: grows abundantly on the higher mountains. *Engl. Bot.* vol. xiv. pl. 1355. *Engl. Fl.* vol. i. p. 140.

F. duriúscula. Hard Fescue. Panicle unilateral, spreading; spikelets oblong, of about six flowers with short awns; stem-leaves nearly flat; root-leaves involute, bristle-shaped.——Straws from one to two feet high: leaves roughish on the keel and edges. Perennial: flowers in June and July: grows in pastures and waste ground; common. *Engl. Bot.* vol. vii. pl. 470. *Engl. Fl.* vol. i. p. 141. *Fl. Scot.* p. 38.

F. rúbra. Creeping Fescue. Panicle unilateral, spreading; spikelets oblong, of about six flowers with short awns; leaves downy above, more or less involute; root extensively creeping.——The long, creeping root furnishes the principal distinctive character of this species. Perennial: flowers in June and July: grows in dry pastures. *Engl. Bot.* vol. xxix. pl. 2056. *Engl. Fl.* vol. i. p. 142.

F. bromóides. Barren Fescue. Panicle unilateral, nearly erect, simple; spikelets oblong, smooth; flowers shorter than their awns; leaves tapering, shorter than their sheath.——Straws from four to ten

inches high: panicle of a few long-stalked spikelets: outer chaff-scale extremely narrow, acute. Annual: flowers in June: grows on walls and sandy ground. *Engl. Bot.* vol. xx. pl. 1411. *Engl. Fl.* vol. i. p. 143. *Fl. Scot.* p. 39.

F. Myúrus. Wall Fescue. Panicle drooping, elongated, rather close; flowers tapering, shorter than their awns, rough at the top; leaves awl-shaped.——About sixteen inches high, with a panicle five or six inches long. Annual: flowers in June and July: grows on walls and dry sandy ground. *Engl. Bot.* vol. xx. pl. 1412. *Engl. Fl.* vol. i. p. 143. *Fl. Scot.* p. 39.

F. uniglúmis. Single-husked Fescue. Panicle erect, nearly simple; flowers tapering, compressed, awned; one of the chaff-scales very minute.——Straws from six to fourteen inches high, erect: leaves somewhat involute, smooth on the back, furrowed and hairy above: panicle rather close, with compressed, rough-edged stalks. Biennial: flowers in June; grows on the sandy shores of the south of England. *Engl. Bot.* vol. xx. pl. 1430. *Engl. Fl.* vol. i. p. 144.

F. gigantéa. Great Fescue. Panicle branched, drooping towards one side, spikelet lance-shaped, compressed; flowers shorter than their awn; leaves narrow, lance-shaped, ribbed.——Stems three or four feet high, erect, smooth, striated: leaves with rough edges and ribs: panicle large, with spikelets of from three to six flowers. Perennial: flowers in July and August: grows in woods and hedges. *Engl. Bot.* vol. xxvi. pl. 1820. *Engl. Fl.* vol. i. p. 144. *Fl. Scot.* p. 39.

F. calamária. Tall Fescue. Panicle repeatedly compound, spreading, erect; spikelets of from two to five cylindrical, keeled, pointed flowers; inner husk folded in the middle.——Straws two or three feet high, round, smooth: leaves lance-shaped, tapering, striated, ribbed, rough at the edges: panicle with slender, angular branches: spikelet small, erect: outer chaff-scale linear, inner awl-shaped. Perennial: flowers in July: grows in mountainous woods. *Engl. Bot.* vol. xiv. pl. 1005. *Engl. Fl.* vol. i. p. 146. *Fl. Scot.* p. 39.

F. loliácea. Spiked Fescue. Spike two-rowed, drooping; spikelet nearly sessile, narrow-oblong; flowers cylindrical, awnless, pointed, with five or six ribs at the top.——Straws two feet high, round, smooth: leaves linear, flat, smooth: spike with a wavy, angular common-stalk: spikelets with ten or twelve cylindrical flowers. Perennial: flowers in June and July: grows in rich moist pastures. *Engl. Bot.* vol. xxvi. pl. 181. *Engl. Fl.* vol. i. p. 147. *Fl. Scot.* p. 40.

F. praténsis. Meadow Fescue. Panicle nearly erect, branched, spreading, inclined to one side; spikelets lance-shaped, compressed, with eight or nine cylindrical flowers; root fibrous.——Straws about two feet high, round, smooth: leaves linear, pointed, striated, rough at the edges: panicle with compressed, rough stalks: nectary four-cleft. Perennial: flowers in June and July: grows in moist pastures and by road-sides. *Engl. Bot.* vol. xxiii. pl. 1592. *Engl. Fl.* vol. i. p. 148. *Fl. Scot.* p. 40.

F. elátior. Tall Fescue. Panicle somewhat drooping, much branched, spreading in all directions; spikelets between egg-shaped and lance-shaped, with numerous cylindrical, somewhat awned flowers; root creeping.——Straws about four feet high, striated, smooth: leaves narrow

lance-shaped, smooth, rough at the edges: nectary four-cleft. Perennial: flowers in June and July: grows in moist meadows; not common. *Engl. Bot.* vol. xxiii. pl. 1593. *Engl. Fl.* vol. i. p. 148. *Fl. Scot.* p. 40.

F. sylvática. Slender Wood Fescue. Spike simple, drooping; spikelets nearly cylindrical, inclining one way; awns longer than the husks; leaves hairy; root fibrous.——Straws two feet high, round, smoothish, very slender: leaves more or less hairy: nectary of two acute scales. Perennial: flowers in July: grows in thickets and hedges. *Engl. Bot.* vol. xi. pl. 729. *Engl. Fl.* vol. i. p. 149. *Fl. Scot.* p. 40: *Bromus sylvaticus.*

F. pinnáta. Spiked Heath Fescue. Spike simple, erect, two-rowed; spikelets nearly cylindrical; awns shorter than the husks; leaves nearly smooth; root somewhat creeping.——Straws about two feet high. Perennial: flowers in July: grows in open fields and heaths. *Engl. Bot.* vol. xi. pl. 730: *Bromus pinnatus. Engl. Fl.* vol. i. p. 150.

37. BRO'MUS.

Calyx of two unequal, egg-shaped or lance-shaped, acute, compressed, awnless chaff-scales, containing an egg-shaped or oblong, compressed, imbricated spikelet of numerous, two-rowed, awned, perfect flowers. Corolla of two unequal husks, the outer elliptical, ribbed, longer than the calyx, cleft at the top, awned on the back just below the summit, with a tapering awn, generally as long as the husk; inner husk nearly as long as the outer, but much narrower, two-ribbed, with membranous inflected margins, and a fringe on the ribs. Nectary a deeply divided scale, or two distinct undivided ones. Filaments hair-like, shorter than the corolla. Anthers short, pendulous, notched at both ends. Germen egg-shaped. Styles distant, lateral. Stigmas densely feathered. Seed oblong, depressed, downy at the summit, united to the inner husk.

B. secalínus. Smooth Rye Brome-grass. Panicle spreading, little branched; spikelets egg-shaped, of about ten, distinct, sub-cylindrical smooth flowers; awns waved, shorter than the husks; leaves slightly hairy.——Straws from two to three feet high: lower branches of the panicle whorled and slightly subdivided, upper simple. Annual: flowers in July and August: grows in corn-fields. *Engl. Bot.* vol. xvii. pl. 1171. *Engl. Fl.* vol. i. p. 152. *Fl. Scot.* p. 41.

B. velutínus. Downy Rye Brome-grass. Panicle spreading, little branched; spikelets oblong, of from ten to fifteen crowded, elliptical, downy flowers; awns as long as the husks; leaves slightly hairy.——Straws about two feet high: panicle with almost entirely simple branches. Annual: flowers in July: grows in corn-fields; rare. *Engl. Bot.* vol. xxvii. pl. 1884. *B. multiflorus. Engl. Fl.* vol. i. p. 152. *Fl. Scot.* p. 41.

B. móllis. Soft Brome-grass. Panicle erect, close, compound; spikelets egg-shaped, slightly compressed, downy; flowers imbricated, depressed, ribbed; awns as long as the husks; leaves and sheaths very soft and downy.——From one to two feet high: spikelets of from five to ten flowers. Biennial: flowers in June and July: grows in

fields, pastures, and by way-sides; abundant. A coarse grass, little relished by cattle. *Engl. Bot.* vol. xv. pl. 1078. *Engl. Fl.* vol. i. p. 153. *Fl. Scot.* p. 41.

B. racemósus. Smooth Brome-grass. Panicle nearly erect spreading, slightly branched; spikelets between egg-shaped and oblong, smooth; flowers imbricated, depressed, ribbed; awns as long as the husks; leaves somewhat downy.——From one to two feet high: spikelets of from five to ten flowers. Biennial: flowers in June: grows in meadows and pastures. *Engl. Bot.* vol. xv. pl. 154. *Engl. Fl.* vol. i. p. 154. *Fl. Scot.* p. 43.

B. squarrósus. Corn Brome-grass. Panicle drooping, scarcely branched; spikelets between egg-shaped and oblong; flowers imbricated, depressed, ribbed; awns spreading; leaves downy.——Straw a foot high, smooth, striated: spikelets few, large, tumid, with from eight to fifteen flowers. Annual: flowers in July: grows in corn-fields. *Engl. Bot.* vol. xxvii. pl. 1885. *Engl. Fl.* vol. i. p. 155. *Fl. Scot.* p. 42.

B. arvénsis. Taper Field Brome-grass. Panicle drooping, spreading, compound with half-whorled branches; spikelets lance-shaped, acute; flowers about eight, imbricated, smoothish, about as long as the straight awn; leaves hairy.——Straw about three feet high, erect, smooth: leaves rough on the edges: panicle very large, with harsh, spreading branches. Annual: flowers in July: grows in corn-fields; rare. *Engl. Bot.* vol. xxviii. pl. 1984. *Engl. Fl.* vol. i. p. 156. *Fl. Scot.* p. 42.

B. erectus. Upright Perennial Brome-grass. Panicle erect, slightly branched; spikelets narrow lance-shaped, compressed; flowers about eight, loosely imbricated, lance-shaped, compressed; awn straight, shorter than the husks; root-leaves very narrow, fringed with scattered hairs.——Straws from two to three feet high. Perennial: flowers in July: grows in fields and by road-sides. *Engl. Bot.* vol. vi. pl. 471. *Engl. Fl.* vol. i. p. 157. *Fl. Scot.* p. 42.

B. asper. Hairy Wood Brome-grass. Panicle branched, drooping; spikelets narrow-oblong; flowers about eight, lance-shaped, compressed, downy; awns shorter than the husks; leaves uniform, the lower ones hairy.——Straw erect, from four to six feet high: leaves lance-shaped, pointed, ribbed, fringed at the edges. Annual: flowers in July and August: grows in woods and hedges. *Engl. Bot.* vol. xvii. pl. 1172. *Engl. Fl.* vol. i. p. 158. *Fl. Scot.* p. 42.

B. stérilis. Barren Brome-grass. Panicle nearly simple, drooping; spikelets narrow lance-shaped; flowers about seven, lance-shaped, compressed, furrowed; awns longer than the husks; leaves downy.——Straws about two feet high: leaves linear, soft and downy, fringed at the edges. Annual: flowers in June and July: grows in hedges and by road-sides. *Engl. Bot.* vol. xv. pl. 1030. *Engl. Fl.* vol. i. p. 159. *Fl. Scot.* p. 43.

B. diándrus. Upright Annual Brome-grass. Panicle erect, somewhat spreading; flowers lance-shaped, with only two stamens.——Straws about a foot high, erect, stiff, slender, smooth. *Engl. Bot.* vol. xiv. pl. 1006. *Engl. Fl.* vol. i. p. 160. *Fl. Scot.* p. 43.

38. STIPA.

Calyx of two nearly equal, lance-shaped, pointed, chaff-scales, con-

taining a single flower. Corolla of two husks, nearly equal in length; the outer lance-shaped, involute, slightly keeled, with a very long terminal, twisted awn, which is jointed at the base, and at length separates; the inner much narrower, awnless, inflected at the edges. Nectary of two narrow lance-shaped, membranous, pointed scales. Filaments shorter than the husks. Anthers linear, erect. Germen oblong. Style short, distinct. Stigmas feathery. Seed cylindrical, pointed, loose, closely enveloped by the hardened outer husk, which is very sharp, and barbed with bristles at the base.

S. pennáta. Common Feather-grass. Awns feathery.——Root fibrous: stems a foot high: leaves erect, long, narrow, acute, roughish, thin: sheaths striated and very long: panicle simple, erect, of six or seven flowers, with feathery awns, about a foot long. Perennial: flowers in June: found near Kendal, in Westmoreland, by Dr. Richardson, but does not now occur there. *Eng. Bot.* vol. xix. p. 1356. *Eng. Fl.* vol. i. p. 162.

39. LAGU'RUS.

Calyx one-flowered, of two long, slender, membranous chaff-scales, fringed, as well as their terminal awn, with numerous soft hairs. Corolla of two unequal husks; the outer longest, egg-shaped, terminating in two equal erect awns, shorter than the calyx, and bearing a much longer awn from the middle of its back, twisted in its lower part, straight in the upper; inner husk smaller, involute, cleft, awnless. Nectary deeply-cleft, acute. Filaments hair-like, shorter than the calyx. Anthers erect, oblong, cleft at both ends. Germen oblong. Styles very short. Stigmas cylindrical, feathery. Seed oblong, obtuse, loose, enveloped in the unaltered husks.

L. ovátus. Hare's-tail-grass.——Straws about a foot high, erect, round: leaves lance-shaped, acute, ribbed, downy on both sides: sheaths inflated, ribbed, very downy: spike egg-shaped, many-flowered, woolly. Annual: flowers in June: grows in Guernsey. *Eng. Bot.* vol. xix. vol. 1334. *Eng. Fl.* vol. i. p. 167.

40. AVE'NA.

Calyx of two somewhat unequal, broadly lance-shaped, thin, awnless chaff-scales, containing a loose spikelet of several flowers. Corolla of two unequal husks; the outer egg-shaped, involute, pointed at both ends, deeply cleft at the top, and bearing from the back a spirally-twisted awn. Nectary of two lance-shaped scales. Filaments shorter than the corolla. Anthers rather short. Germen obtuse. Styles short. Stigmas densely feathered. Seed oblong, sometimes downy, enveloped in the hardened outer husk, which retains its awn.

A. fatua. Wild Oat. Panicle erect; spikelets pendulous; flowers about three, shorter than the calyx, bristly at the base, all awned.——Straws three feet high, erect, round, smooth: leaves flat, linear, rough, sometimes hairy: panicle erect and spreading, with half-whorled, rough branches. The twisted awn makes an excellent hygrometer, and

Smith says the flowers are used by rustic anglers instead of artificial flies. Annual: flowers in June and July: grows among oats and barley; common. *Eng. Bot.* vol. xxxi. pl. 2221. *Eng. Fl.* vol. i. p. 163. *Fl. Scot.* p. 43.

A. strigòsa. Bristle-pointed Oat. Panicle oblong, inclined to one side; spikelets of two flowers; outer husk tipped with two straight bristles.——Straws three feet high: leaves rough: chaff-scales as long as the spikelet: dorsal twisted awn twice the length of the flower. Annual: flowers in June and July: grows in corn-fields. *Eng. Bot.* vol. xviii. pl. 1266. *Eng. Fl.* p. 164.

A. pubéscens. Downy Oat-grass. Panicle erect, nearly simple; flowers about three, longer than the calyx, with a bearded stalk; leaves flat, downy; root somewhat creeping.——Straws about two feet high, smooth: leaves flat, obtuse, covered with soft hairs: flowers generally three, one of them imperfect: awn from the middle of the husk. Perennial: flowers in June: grows in pastures; not common. *Eng. Bot.* vol. xxiii. pl. 1640. *Eng. Fl.* vol. i. p. 164. *Fl. Scot.* p. 43.

A. praténsis. Narrow-leaved Oat-grass. Panicle erect, with very short simple branches; flowers about five, longer than the calyx, with a hairy stalk; leaves involute, finely serrated, with smooth sheaths. ——Straw about a foot high, erect, stiff: leaves mostly radical: panicle erect, simple, with some of the upper spikelets sessile. Perennial: flowers in July: grows in dry pastures. *Eng. Bot.* vol. xvii. pl. 1204. *Engl. Fl.* vol. i. p. 165. *Fl. Scot.* p. 43.

A. alpina. Alpine Oat-grass. Panicle erect, slightly branched; flowers about five, longer than the calyx, with their stalk bearded under each; leaves flat, minutely serrated; root fibrous.——Two feet high, erect: leaves linear, rough on the edges and ribs: panicle erect, with rough branches. Perennial: flowers in July: found by Mr. G. Don, on the rocky summits of the Clova mountains in Angusshire. *Eng. Bot.* vol. xxx. pl. 2141. *Engl. Fl.* vol. i. p. 165. *Fl. Scot.* p. 43: *A. planiculmis.*

A. flavéscens. Yellow Oat-grass. Panicle erect, spreading, much branched; flowers about three, longer than the calyx; leaves flat, a little downy; root somewhat creeping.——Straws about eighteen inches high: panicle of numerous yellowish, shining spikelets. Perennial: flowers in July: grows in dry pastures; common. *Eng. Bot.* vol. xiv. pl. 952. *Eng. Fl.* vol. i. p. 166. *Fl. Scot.* p. 44.

41. LOLIUM.

Common receptacle elongated, alternately channelled or excavated to receive the spikelets. Calyx many-flowered, of one lance-shaped permanent chaff-scale. Corolla of two unequal husks, opposite to the calyx; the outer lance-shaped, somewhat keeled, acute, cleft at the point, the keel terminated by an awn; the inner elliptical, smaller, with the edges inflected. Nectary of two egg-shaped scales. Filaments hair-like, shorter than the corolla. Anthers oblong, cleft at each end. Germen obtuse. Styles very short. Stigmas feathery. Seed oblong, convex on one side, flat and furrowed on the other.

L. perénne. Common Rye Grass. Red Darnel. Corolla very slightly awned; spikelets longer than the calyx; flowers lance-shaped.——Root fibrous: stems several, about a foot high, round, smooth, stiff, with purplish tumid joints: leaves linear, pointed, smooth, striated: spike erect, purplish. This plant is subject to considerable variation, as it grows in rich or poor soil, being from six inches high to nearly three feet, and having the spike with few spikelets, or with a great number closely crowded together. It is well known to farmers, being extensively cultivated. Perennial: flowers in June and July: grows in meadows and pastures, by road-sides, &c.; common. *Engl. Bot.* vol. v. pl. 315. *Engl. Fl.* vol. i. p. 173. *Fl. Scot.* p. 45.

L. temulentum. Bearded Darnel. Corolla with a long awn; spikelets shorter than the calyx; flowers elliptical; straw rough.——Straws two or three feet high, round, rough, at the upper part: leaves rough on the upper side: spike from four to six inches long, with a rough stalk. Annual: flowers in July: grows in fields among wheat or barley. The seeds of this plant are said to produce intoxication and fatal convulsions. *Engl. Bot.* vol. xvi. pl. 1124. *Engl. Fl.* vol. i. p. 174. *Fl. Scot.* p. 45.

L. arvense. White Darnel. Corolla slightly awned; spikelets as long as the calyx; flowers elliptical; straw smooth.——Straws two feet high: leaves broad, rough on the upper side. Annual: flowers in July: grows in cultivated fields; not common. *Engl. Bot.* vol. xvi. pl. 1125. *Engl. Fl.* vol. i. p. 175. *Fl. Scot.* p. 45.

42. ROTTBOL'LIA.

Common receptacle elongated, jointed, ultimately separating, alternately excavated to receive the flowers, of which there are commonly two in each excavation, one of them only being perfect. Calyx of two parallel lance-shaped valves, opposite to the excavation. Corolla of the perfect flower of two lance-shaped, membranous, nearly equal husks, inflected at the edges. Nectary of two acute scales. Filaments thread-like. Anthers oblong, cleft at both ends. Germen oblong, obtuse. Styles short. Stigmas feathery, spreading. Seed oblong, shut up in the cavity of each joint of the receptacle by the closed husks, and falling off along with it.

R. incurvàta. Sea Hard-grass. Spike cylindrical, slender; chaff-scales united below; corolla awnless.——Straws numerous, from three to five inches long, spreading, round, smooth, jointed, leafy: leaves short, firm: spike very slender, hardly distinguishable from the straw. Annual: flowers in July and August: grows in salt marshes. *Engl. Bot.* vol. xi. pl. 760. *Engl. Fl.* vol. i. p. 176. *Fl. Scot.* p. 46.

43. E'LYMUS.

Common receptacle elongated, alternately excavated and toothed on each side. Spikelets two or more at each tooth. Calyx to each spikelet of two unequal, broadly lance-shaped husks, the outer largest, keeled, and pointed or awned, the inner cleft, inflected at the edges, with a rib on each side. Nectary of two lance-shaped scales. Fila-

ments hair-like, very short. Anthers linear, notched at both ends. Germen turbinate. Stigmas feathery, spreading. Seed linear, channelled on the upper side, very hairy at the summit.

E. arenárius. Upright Sea Lyme-grass. Spike erect, close; calyx lance-shaped, as long as the spikelets; leaves stiff, with a thorny point.——Root creeping: straws three or four feet high, erect, firm, round, striated, leafy; leaves hard and stiff, involute, with a thorny point; spike from six to twelve inches long. Perennial: flowers in July: grows in sand on the sea-shore, in England and Scotland; but not common. *Eng. Bot.* vol. xxiv. pl. 1672. *Engl. Fl.* vol. i. p. 177. *Fl. Scot.* p. 46.

E. geniculátus. Pendulous Sea Lyme-grass. Spike bent downwards, lax; common receptacle winged; calyx awl-shaped, longer than the spikelets; leaves stiff, with a thorny point.——Root fibrous: straws taller but more slender than in the last: spike nearly two feet long. Perennial: flowers in July: grows in marshes, near the coast; rare. *Engl. Bot.* vol. xxiii. pl. 1586. *Engl. Fl.* vol. i. p. 178.

E. europæ'us. Wood Lyme-grass. Spike erect, close; spikelets of about two flowers, rough, awned; calyx awned, as long as the spikelet; leaves flat, pliant.——Root fibrous: straw erect, two feet high, round, smooth, leafy: leaves lance-shaped, ribbed, flat, acute, rough; spike two or three inches long, erect, close, green: spikelets three at each notch. Perennial: flowers in June: grows in woods, thickets and hedges, in England. *Engl. Bot.* vol. xix. pl. 1317. *Engl. Fl.* vol. i. p. 178.

44. HO'RDEUM.

Common receptacle elongated, jointed, toothed alternately on each side, the intermediate spaces flattened and bordered. Flowers three at each tooth, not all perfect. Calyx to each flower of two pointed or awned, parallel, erect, chaff-scales. Corolla of two husks; the outer egg-shaped, angular, terminated by a long straight, rough awn; the inner smaller, lance-shaped, flat, pointed, inflected at the edges. Nectary of two acute scales. Filaments hair-like, short. Anthers notched at both ends. Germen turbinate. Styles very short. Stigmas feathery, reflected. Seed oblong, pointed at both ends, channelled on the upper side, firmly united to the husks.

H. murinum. Wall Barley. Way Bennet. Lateral flowers with stamens only; chaff-scales of the intermediate flower lance-shaped, fringed.——Root fibrous: stems from twelve to eighteen inches high, spreading at the base, then erect, smooth, leafy: leaves linear, flat, roughish: two lateral flowers stalked: central flower perfect and large. Annual: flowers in the summer months: grows by walls and road-sides; common. *Engl. Bot.* vol. xxviii. pl. 1971. *Engl. Fl.* vol. i. p. 179.

H. pratense. Meadow Barley. Lateral flowers destitute of germen; all the chaff-scales bristle-shaped and rough.——Root fibrous: stems about two feet high, smooth and leafless at the top: leaves narrow, roughish: lateral flowers stalked: central flower perfect and largest.

Perennial: flowers in the summer months: grows in meadows and pastures. *Engl. Bot.* vol. vi. pl. 409. *Eng. Fl.* vol. i. p. 180.

H. maritimum. Sea Barley. Squirrel-tail-grass. Lateral flowers with stamens only, their awns shorter; the inner scale of their calyx half egg-shaped.——Resembles *H. murinum*, but is smaller and stiffer: the awns are stiff and strongly barbed, so as to be extremely troublesome to horses when mixed with hay. Annual: flowers in the summer months: grows in pastures and sandy ground near the sea. *Engl. Bot.* vol. xvii. pl. 1205. *Engl. Fl.* vol. i. p. 181.

45. TRITICUM.

Common receptacle elongated, toothed alternately on each side, compressed, undulated. Spikelets solitary at each tooth, transverse to the stalk, many-flowered. Calyx of two oblong, ribbed, nearly equal, opposite, chaff-scales, with or without terminal awns. Flowers three or more in a spikelet, applied laterally to the receptacle; outer husk oblong, furrowed, pointed or awned; inner flat, awnless, inflected at each end. Nectary of two acute scales. Filaments hair-like. Anthers linear, forked at both ends. Germen turbinate. Styles short, distinct. Stigmas feathery, reflected. Seed oblong, blunt at both ends, convex on one side, channelled on the other.

T. junceum. Sea Wheat-grass. Rush Wheat. Chaff-scales obtuse, many-ribbed; flowers of each spikelet about five, awnless; leaves involute, with a thorny point.——Root creeping: straw about a foot and a half high, simple, ascending, round, leafy, smooth below, striated above: leaves stiff, furrowed on the upper side, smooth on the back: spike from four to six inches long: spikelets rather distant, egg-shaped, of five or six awnless flowers: the receptacle separates at the joint as in *Rottbollia incurvata*. Perennial: flowers in July: grows in sand on the sea-coast, along with *Arundo arenaria*; common. Its long roots tend to fix the sand. *Engl. Bot.* vol. xii. pl. 814. *Engl. Fl.* vol. i. p. 182. *Fl. Scot.* p. 44.

T. répens. Creeping Wheat-grass. Couch-grass. Chaff-scales pointed or awned, lance-shaped, many-ribbed; flowers of each spikelet about five, sharp-pointed or awned; leaves flat; root creeping.——Root long, creeping: straws about two feet high, erect, leafy: leaves linear, flat, spreading, their margins and upper surface rough: spike about three inches long, erect, its stalk somewhat hairy: a variety, of a pale bluish green or glaucous colour, occurs in maritime places. Perennial: flowers in June and July: grows in fields, by hedges and in waste places; common. *Eng. Bot.* vol. xiii. pl. 909. *Eng. Fl.* vol. i. p. 183. *Fl. Scot.* p. 44.

T. canin'um. Fibrous-rooted Wheat-grass. Dog's Wheat. Chaff-scales somewhat awned, lance-shaped, with three or five ribs; flowers of each spikelet four, awned; leaves flat; root fibrous.——Root of numerous downy fibres: straws about two feet high, erect, leafy: leaves linear, flat, nearly erect, rough on both sides: spike three or four inches long, a little inclining. Perennial: flowers in June and July: grows in woods and hedges. *Engl. Bot.* vol. xx. pl. 1372. *Engl. Fl.* vol. i. p. 184. *Fl. Scot.* p. 44.

T. cristátum. Crested Wheat-grass. Chaff-scales elliptical, awned, keeled, indistinctly ribbed; flowers awned; spikelets of about four crowded flowers; straws simple.——Root of long, woolly fibres: straws about eighteen inches high, stiff, slender, leafy: leaves linear, keeled, long-pointed, very hairy on the upper surface: spike an inch or more in length. Perennial: flowers in July: found on the coast between Arbroath and Montrose, by Mr. G. Don. *Engl. Bot.* vol. xxxii. pl. 2267. *Engl. Fl.* vol. i. p. 185. *Fl. Scot.* p. 45.

T. loliáceum. Dwarf Sea Wheat-grass. Chaff-scales obtuse, awnless; flowers of each spikelet numerous, elliptical, ribbed, awnless; spikelets all directed one way; straw branched; root fibrous.——Root of long, downy fibres: straw stiff and wiry, three or four inches high, very smooth, reddish brown: leaves linear, acute, nearly smooth. Annual: grows in sandy pastures on the sea-coast; not common. *Engl. Bot.* vol. iv. pl. 221. *Engl. Fl.* vol. i. p. 185. *Fl. Scot.* p. 45.

TRIGYNIA.

46. MON'TIA.

Calyx inferior, of two egg-shaped, concave, erect, permanent leaves. Corolla of one petal, divided into five segments; three smaller, bearing the stamens. Filaments hair-like, as long as the corolla, to which they are attached. Anthers small, two-lobed. Germen superior, turbinate, three-lobed. Styles very short. Stigmas three, oblong, downy above. Capsule turbinate, one-celled, three-valved. Seeds three, roundish.

M. fontána. Water Chickweed. Water Blinks.——Root fibrous: stems succulent, two or three inches high, much branched: leaves opposite, egg-shaped: flowers small, white: seeds black, shining. Annual: flowers in May: grows in springs, and by the sides of rivulets, forming dense tufts; common. *Engl. Bot.* vol. xvii. pl. 1206. *Engl. Fl.* vol. i. p. 187.

47. HOLOSTEUM.

Calyx inferior, of five egg-shaped, permanent leaves. Petals five, oblong, deciduous, jagged or toothed. Filaments three, hair-like, shorter than the petals. Anthers roundish. Germen roundish. Styles three, hair-like, short. Stigmas bluntish, downy. Capsule nearly cylindrical, one-celled, splitting at the top into six teeth. Seeds numerous, stalked, attached to a central receptacle.

H. umbellátum. Umbelliferous Mouse-ear, or *Jagged Chickweed.* Flowers in umbels; leaves egg-shaped, acute.——Root fibrous: stems four or five inches high, round, leafy: petals white, tinged with red. Annual: flowers in April: grows on old walls, about Norwich and Bury. *Engl. Bot.* vol. i. pl. 27. *Engl. Fl.* vol. i. p. 188.

48. POLYCAR'PON.

Calyx inferior, of five egg-shaped, keeled, permanent leaves. Petals five, shorter than the calyx, egg-shaped, notched at the end, permanent. Filaments three, sometimes five, thread-shaped, half the length of the calyx. Anthers roundish, two-lobed. Germen egg-shaped. Styles three, short. Stigmas blunt. Capsule egg-shaped, one-celled, three-valved. Seeds numerous, egg-shaped, nearly sessile, on a central receptacle.

P. tetraphy'llum. Four-leaved All-seed.——Root tapering: stem much branched, lying flat on the ground; leaves inversely egg-shaped, smooth, stalked, in fours, one pair crossing the other: panicles terminal, repeatedly forked: flowers greenish white. *Engl. Bot.* vol. xv. pl. 1031. *Engl. Fl.* vol. i. p. 189.

Class IV. TETRANDRIA.

Plants bearing Flowers with Four Stamens.

Order I. MONOGYNIA. *One Pistil.*

* *Flowers of one petal, superior, one-seeded.*

1. DIPSACUS. *Involucre* many-leaved. *Calyx* single, superior, of one leaf, cup-shaped, undivided, crowning the seed.
2. SCABIO'SA. *Involucre* many-leaved. *Calyx* double, superior, variously cut, crowning the seed.

** *Flowers of one petal, superior, two-seeded.*

6. RU'BIA. *Corolla* bell-shaped. *Fruit* pulpy.
5. GA'LIUM. *Corolla* wheel-shaped. *Fruit* dry, crowned by the calyx.
4. ASPE'RULA. *Corolla* tubular. *Fruit* not crowned.
3. SHERARDIA. *Corolla* tubular. *Fruit* crowned.

*** *Flowers of one petal, inferior.*

7. E'XACUM. *Corolla* salver-shaped, spreading. *Stamens* shorter than the limb. *Capsule* two-valved, separating at the top.
8. PLANTA'GO. *Corolla* with the segments reflected. *Stamens* very long. *Capsule* two-celled, bursting all round.
9. CENTUN'CULUS. *Corolla* tubular, spreading. *Stamens* short. *Capsule* one-celled, bursting all round.

**** *Flowers of four petals.*

11. EPIME'DIUM. *Nectaries* four, lying on the petals. *Pod* one-celled, many-seeded. *Calyx* deciduous.
12. CO'RNUS. *Nectaries* none. *Drupe* inferior. *Nut* two-celled.

(Cardamine. Senebiera.)

***** *No petals.*

13. PARIETA'RIA. *Calyx* four-cleft, inferior. *Stamens* elastic. *Seed* inclosed in the elongated calyx. Some flowers destitute of stamens.
14. ISNA'RDIA. *Calyx* four-cleft, superior. *Capsule* quadrangular, four-celled, crowned by the calyx.
10. SANGUISO'RBA. *Calyx* four-cleft, superior, coloured. *Stamens* dilated upwards. *Capsule* quadrangular, one-celled, not bursting.
15. ALCHEMI'LLA. *Calyx* eight-cleft, inferior. *Fruit* one-seeded, surrounded by the calyx.

Order II. DIGYNIA. *Two Pistils.*

16. BUFFO'NIA. *Petals* four. *Capsule* two-valved. *Seeds* two. *Alchemilla*, some species of *Gentiana* and *Cuscuta*.

Order III. TETRAGYNIA. *Four Pistils.*

17. I'LEX. *Corolla* wheel-shaped, four or five-cleft. *Berry* round, four-seeded, some flowers destitute of pistil.
20. SAGI'NA. *Petals* four. *Capsule* one-celled, four-valved.
21. MŒN'CHIA. *Petals* four. *Capsule* one-celled, one-valved.
23. RADIO'LA. *Petals* four. *Capsule* eight-celled, eight-valved.
22. TILLÆ'A. *Petals* four, three or five. *Capsules* several. *Seeds* several.
18. POTAMOGETON. *Petals* four. *Calyx* none. *Seeds* four, naked, sessile.
19. RUPPIA. *Petals* none. *Calyx* none. *Seeds* four, stalked.

(Cerastium.)

TETRANDRIA—MONOGYNIA.

1. DI'PSACUS.

Involucre many-flowered, of many spreading, permanent leaves. Calyx superior, double, short, undivided. Corolla of one petal, tubular; the limb four-lobed, the outer lobe larger. Filaments hair-like, longer than the corolla. Anthers oblong, fixed sidewise. Germen inferior. Style thread-like, as long as the corolla. Stigma simple. Seed naked, solitary, oblong, crowned with the calyx. Common receptacle, conical, covered with scales.

D. fullónum. Fuller's Teasel. Leaves united, serrate; scales of the receptacle bent backwards; involucre spreading.——Root fleshy, tapering: stem five or six feet high, erect, furrowed, prickly, branched above: leaves oblong, sessile, united at the base, serrate: flowers whitish. Cultivated for the use of clothiers, who employ the scales of the receptacle to raise the knap upon woollen cloths. For this purpose the heads are fixed round the circumference of a large broad wheel, which is made to turn round, and the cloth is held against them. Biennial: flowers in July: grows about hedges. *Engl. Bot.* vol. xxix. pl. 2080. *Engl. Fl.* vol. i. p. 192. *Fl. Scot.* p. 49.

D. sylvéstris. Wild Teasel. Leaves opposite, serrated; scales of the receptacle straight; involucre bent inwards, longer than the head of flowers.——*About four feet high*: leaves lance-shaped: heads large.

Biennial: flowers in July: grows about hedges and by road-sides; frequent in England. *Engl. Bot.* vol. xv. pl. 1032. *Engl. Fl.* vol. i. p. 193. *Fl. Scot.* p. 49.

D. pilósus. Small Teasel. Shepherd's Staff. Leaves stalked, with two leaflets at the base; receptacle turned downwards, about the length of the head.——Stem three or four feet high: flowers white, in small, round heads. Biennial: flowers in August and September: grows in moist, shady places. In Norfolk, Suffolk, and Derbyshire. Smith. *Engl. Bot.* vol. xiii. pl. 877. *Engl. Fl.* vol. i. p. 193. *Fl. Scot.* p. 49.

2. SCABIO'SA.

Involucre many-flowered, of many spreading leaves, arranged in several rows. Calyx double, the outer shortest, plaited, the inner in five awl-shaped segments. Corolla of one petal, tubular, dilated upwards; limb with four or five divisions. Filaments hair-like, longer than the limb. Anthers oblong, fixed sidewise. Germen inferior. Style thread-like, as long as the corolla. Stigma blunt, cleft. Seed naked, solitary, crowned by the calyx. Common receptacle convex, chaffy, bristly or naked.

S. succísa. Devil's-bit Scabious. Corolla divided into four equal segments; heads of flowers nearly globular; leaves of the stem distantly toothed.——Root fleshy, abrupt at the lower end: stem about a foot high: root-leaves inversely egg-shaped, entire: stem-leaves toothed or serrated, the uppermost lance-shaped entire: flowers deep purplish blue. Perennial: flowers in June and July: grows in meadows and pastures; common. "The great part of the root," says Gerarde, "seemeth to be bitten away: old fantasticke charmers report, that the divel did bite it for envie, because it is an herbe that hath so many good vertues, and is so beneficial to mankinde." *Engl. Bot.* vol. xiii. pl. 878. *Engl. Fl.* vol. i. p. 194.

S. arvénsis. Field Scabious. Corolla four-cleft; the external flowers radiating; leaves pinnatifid, jagged; stem bristly.——Roots long, branched: stem about three feet high: root leaves lance-shaped, serrated, stalked: stem leaves pinnatifid, sessile: flowers pale-purple, those of the circumference larger. Perennial: flowers in July. grows in pastures, the edges of corn-fields, and by road-sides; common. *Engl. Bot.* vol. x. pl. 659. *Engl. Fl.* vol. i. p. 195.

S. columbária. Small Scabious. Corolla divided into five unequal segments; root-leaves egg-shaped, notched; the others pinnatifid, linear.——Root woody: stem about a foot high: root-leaves stalked, the others sessile: flowers radiating. Perennial: flowers in June and July: grows in dry pastures; rare. *Engl. Bot.* vol. xix. pl. 1311. *Engl. Fl.* vol. i. p. 195.

3. SHERA'RDIA.

Calyx very small, of one leaf, six-toothed, superior. Corolla of one petal, funnel-shaped, with four equal, acute segments. Filaments recurved, arising from the mouth of the tube. Anthers roundish. Germen inferior, two-lobed. Style hair-like, cleft at the top. Stigmas knobbed. Seeds two, roundish, rough, crowned with the calyx.

S. arvénsis. Little Field-Madder or *Spurwort.* All the leaves in whorls; flowers terminal.——Root small: stems numerous, spreading, generally decumbent: leaves six in a whorl: flowers pale purplish blue, in a sessile terminal umbel. Annual: flowers from May to July: grows in corn and fallow fields; common. *Engl. Bot.* vol. xiii. pl. 891. *Engl. Fl.* vol. i. p. 196.

4. ASPE'RULA.

Calyx small, four-toothed, superior, deciduous. Corolla of one petal, funnel-shaped; tube nearly cylindrical; limb in four oblong, spreading segments. Filaments from the mouth of the tube, short. Anthers two-lobed. Germen inferior, two-lobed. Style thread-like, cleft. Stigmas knobbed. Seeds two, adhering together, not crowned by the calyx.

A. odoráta. Sweet Woodruff. Leaves eight in a whorl, lance-shaped; panicles stalked, few-flowered.——Stems simple, about a foot high: leaves spreading, rough at the edges: flowers white. The plant in drying emits a pleasant odour, resembling that of new hay. Perennial: flowers in May: grows in woods and shady places. *Engl. Bot.* vol. xi. pl. 755. *Engl. Fl.* vol. i. p. 190.

A. cynan'chica. Squinancy Wort. Small Woodruff. Leaves four in a whorl, linear, the upper ones very unequal; flowers four-cleft.——Stems about six inches high: flowers white, in terminal panicles. Perennial: flowers in June and July: grows on dry banks, in various parts of England.

5. GA'LIUM.

Calyx very small, four-toothed, superior. Corolla of one petal, wheel-shaped, with four acute divisions. Filaments from the base of the corolla, awl-shaped, shorter than the limb. Anthers two-celled. Germen inferior, of two united globes. Style thread-shaped, cleft, as long as the stamens. Stigmas knobbed. Seeds two, naked, united, globular, not crowned by the calyx.

* *Fruit smooth.*

G. crucidtum. Cross-wort. Leaves four in a whorl, egg-shaped, hairy; stem hairy, simple above; flower-stalks axillar, corymbose, two leaved.——Stem branched at the base, a foot high, square, feeble: flowers small, yellow. Perennial: flowers in May and June: grows by hedges and way-sides; common. *Eng. Bot.* vol. ii. pl. 143. *Eng. Fl.* vol. i. p. 199.

G. palústre. White Water Bed-straw. Leaves from four to six in a whorl, unequal, oblong, obtuse; stems weak, branched in the upper part.——Stem much branched, from two to four feet high: flowers white, in terminal panicles. Perennial: flowers in June: grows in moist meadows and the borders of rivers and pools, among reeds; common. *Eng. Bot.* vol. xxvi. pl. 1857. *Eng. Fl.* vol. i. p. 200.

G. Witherin'gii. Rough Heath Bed-straw. Leaves about five in a whorl, lance-shaped, spreading, fringed with bristles; stem erect, slightly branched, rough.——Stem erect, weak, about a foot high, slightly branched, four-cornered, with minute hooks curved down-

wards: panicles small, terminal: corolla cream-coloured. Perennial: flowers in July: grows in moist, heathy places. *Eng. Bot.* vol. xxxi. pl. 2206. *Eng. Fl.* vol. 1. p. 200.

G. uliginósum. Rough Marsh Bed-straw. Leaves six in a whorl, between lance-shaped and inversely egg-shaped, stiff, bristle-pointed, the margins rough with recurved prickles.——Stems feeble, about a foot high, with recurved prickles: panicles terminal, small: corolla white. Perennial: flowers in August: grows in wet places among reeds and other plants; common. *Engl. Bot.* vol. xxviii. pl. 1972. *Engl. Fl.* vol. i. p. 201.

G. saxátile. Smooth Heath Bed-straw. Leaves six in a whorl, inversely egg-shaped, bristle-pointed; stem much branched, smooth, prostrate.——Stems prostrate, spreading, square, smooth: flowers numerous, white, in terminal and lateral panicles. Perennial: flowers in June and July: grows abundantly in dry heathy places, among stones, &c. *Engl. Bot.* vol. xii. pl. 815. *Engl. Fl.* vol. i. p. 201.

G. eréctum. Upright Bed-straw. Leaves about eight in a whorl, lance-shaped, bristle-pointed, the edges with minute prickles pointing forward; stem weak, slightly hairy under the joints; segments of the corolla taper-pointed.——Stems rather erect, swelled at the joints, four-cornered, somewhat hairy, branched: flowers white, in dense terminal, compound panicles. Perennial: flowers in June and July: grows in hedges and pastures. *Engl. Bot.* vol. xxix. pl. 2067. *Engl. Fl.* vol. i. p. 201.

G. ánglicum. Wall Bed-straw. Leaves six in a whorl, lance-shaped, pointed, fringed with prickles; stems straggling, rough.——Stems decumbent, square, the angles rough with deflected prickles: flowers pale greenish-yellow. Annual: flowers in June and July: grows on walls and dry sandy-ground in the south of England. *Engl. Bot.* vol. vi. pl. 384. *Engl. Fl.* vol. i. p. 209.

G. aristátum. Bearded Bed-straw. Leaves six in a whorl, stalked, lance-shaped, bristle-pointed, the edges with minute prickles pointing forward; stem much branched, spreading, smooth; segments of the corolla taper-pointed.——Stems numerous, a foot high, erect, square, smooth: flowers white, interminal, compound panicles. Perennial: flowers in July and August. Found in Angus-shire by Mr. G. Don. *Engl. Fl.* vol. i. p. 204.

G. verrucósum. Warty-fruited Bed-straw. Leaves six in a whorl, lance-shaped, the edges with minute prickles pointing forward; stem spreading, slightly branched, rough at the angles; stalks axillar, three flowered.——Stems several, about six inches long: flowers small, pale-yellow: fruit covered with pyramidal warts. Annual: flowers in July. Carse of Gowrie and near Forfar, Mr. G. Don. Near Malton, Yorkshire, Mr. R. Miller. *Engl. Bot.* vol. xxxi. pl. 2173. *Engl. Fl.* vol. i. p. 205.

G. tricórne. Three-flowered Goose-grass. Leaves about eight in a whorl, lance-shaped, the edges and ribs with minute reflected prickles; stems several, simple, with deflected prickles; stalks axillar, three-flowered.——Stems weak, spreading: flowers greenish-white: fruit covered with bristly granulations. Annual: flowers in July: grows in dry fields; not common. *Engl. Bot.* vol. xxiii. pl. 1641. *Engl. Fl.* vol. i. p. 205.

G. spérium. *Smooth-fruited Corn Bed-straw.* Leaves about eight in a whorl, lance-shaped, the edges rough with minute reflected prickles; stems with reflected prickles; stalks axillar, many-flowered; fruit smooth.——Stems weak, spreading: flowers greenish-white, in axillar cymes. Annual: flowers in June and July: found in corn-fields, about Forfar, by Mr. G. Don. *Engl. Bot.* vol. xxvi. pl. 1871. *Engl. Fl.* vol. i. p. 206.

G. pusillum. *Least Mountain Bed-straw.* Leaves eight in a whorl, narrow lance-shaped, bristle-pointed, somewhat hairy, entire at the margin; panicles terminal, forked; fruit smooth.——Stems very numerous, branched, square, spreading: flowers white, in forked panicles, terminating the stem and branches. Perennial: flowers in July and August: grows in dry places on hilly ground. *Engl. Bot.* vol. ii. pl. 74. *Engl. Fl.* vol. i. p. 206.

G. Mollúgo. *Great Hedge Bed-straw.* Leaves eight in a whorl, elliptical, bluntish, bristle-pointed, rough-edged; flowers in loose terminal panicles.——Stem four feet high, feeble, square, swelled above the whorls, smoothish: flowers abundant, white. Perennial: flowers in July and August: grows in hedges and thickets. *Engl. Bot.* vol. xxiv. pl. 1673. *Engl. Fl.* vol. i. p. 203.

G. vérum. *Common Yellow Bed-straw.* Leaves eight in a whorl, linear, channelled, entire at the edges, rough; flowers in dense panicles.——Root very long, creeping, reddish-brown: stems about a foot high, erect, hard, much branched: flowers greenish-yellow, very numerous, in dense panicles. The roots are used in the Hebrides for dyeing a brownish-red colour: in sandy soil they attain a length of many feet, and are there easily procured, but the digging for them is injurious by setting loose the sand. Perennial: flowers in June and July: grows in pastures, abundantly. *Engl. Bot.* vol. x. pl. 660. *Engl. Fl.* vol. i. p. 208.

** *Fruit covered with Bristles.*

G. boreále. *Cross-leaved Bed-straw.* Leaves four in a whorl, between egg-shaped and lance-shaped, three nerved, smooth, with rough edges; stems erect.——Root creeping, reddish: stems a foot high, erect, square, roughish: flowers white, in numerous branched panicles. Perennial: flowers in July: grows in shady places, by rivers and lakes, in the north of England, and in Scotland. *Engl. Bot.* vol. ii. pl. 105. *Engl. Fl.* vol. i. p. 209.

G. Aparine. *Goose-grass,* or *Cleavers.* Leaves eight in a whorl, lance-shaped, keeled, rough, fringed with reflected prickles; stems feeble.——Root fibrous: stem branched, from two to six feet long; flowers few, white, in axillar panicles. Annual: flowers from May to August: grows in hedges; common. *Engl. Bot.* vol. xii. pl. 816. *Engl. Fl.* vol. i. p. 210.

6. RU'BIA.

Calyx very small, four-toothed, superior. Corolla of one petal, bell-shaped, with four or five divisions, without a tube. Filaments awl-shaped, shorter than the corolla. Anthers of two round cells. Germen inferior, of two round lobes. Style thread-shaped, cleft at the top. Stigmas knobbed. Berry of two smooth lobes. Seeds solitary, roundish, with a depression.

R. peregrina. Wild Madder. Leaves about four in a whorl, elliptical, shining and smooth on the upper side; flowers five-cleft.—— Root creeping, fleshy: stem square, branched, partly remaining during the winter: flowers yellowish-green, in compound terminal panicles. Perennial: flowers in June and July: grows in thickets, and on sandy ground, in Devonshire, Cornwall, South Wales, &c. *Engl. Bot.* vol. xii. pl. 851. *Engl. Fl.* vol. i. p. 211.

7. EX'ACUM.

Calyx of one leaf, inferior, deeply divided into four equal, acute segments. Corolla of one petal, permanent; tube globular, as long as the calyx; limb four-cleft. Filaments thread-shaped, attached to the tube, as long as the limb. Anthers roundish, two-celled. Germen oval, superior. Style thread-shaped, erect, as long as the limb. Stigma knobbed. Capsule filling the tube of the corolla, which remains upon it. Seeds numerous, small, attached to a central receptacle.

E. filiförme. Least Gentian. Marsh Centaury. Leaves sessile; stem thread-like, forked; flowers on long stalks.——Stem about three or four inches high, erect, round, branched: leaves chiefly radical, lance-shaped: flowers small, erect, yellow. Annual: flowers in July: grows on sandy bogs, in the south of England. *Engl. Bot.* vol. iv. pl. 235. *Engl. Fl.* vol. i. p. 212.

8. PLANTA'GO.

Calyx inferior, of one leaf, four-cleft, permanent. Corolla of one petal, tubular, membranous, permanent; tube swelled; limb four-cleft, reflected. Filaments thread-like, arising from the tube, exceedingly long. Anthers oblong, compressed, two-celled. Germen inferior, egg-shaped. Style thread-shaped, half as long as the stamens. Stigma hairy, acute. Capsule egg-shaped, two-celled. Seeds oblong, sessile.

P. májor. Greater Plantain. Leaves egg-shaped, smooth, on longish stalks; flower-stalks round; spike long and tapering; seeds numerous. ——Root of long fibres: leaves broad, with seven ribs: stalk from nine to eighteen inches high, somewhat rough with short hairs. Perennial: flowers in June and July: grows in pastures and by waysides; not uncommon. *Engl. Bot.* vol. xxii. pl. 1558. *Engl. Fl.* vol. i. p. 213.

P. média. Hoary Plantain. Leaves egg-shaped, downy, on very short stalks; flower-stalks round; spike cylindrical; seeds one in each cell.——Root somewhat woody: leaves hoary, with seven ribs: stalk about six inches high, downy. Perennial: flowers in June and July: grows in pastures and by waysides; common. The leaves of this and the preceding species are by the common people frequently applied to wounds. Cattle generally reject them. *Eng. Bot.* vol. xxii. pl. 1559. *Engl. Fl.* vol. i. p. 214.

P. lanceoláta. Ribwort Plantain. Leaves lance-shaped; flower-stalks deeply furrowed; spike egg-shaped.——Leaves tapering at the base into a broad stalk: hairy at its insertion: stalk about a foot high: spike dark brown. Perennial: flowers from May to August: grows in pastures, meadows, on banks, by waysides, &c.; common. *Engl. Bot. vol. viii. pl. 175. Engl. Fl.* vol. i. p. 214.

P. marítima. Sea Plantain. Leaves linear, channelled, nearly entire; flower-stalks round, longer than the leaves; spike cylindrical.——Roots large, long, somewhat woody: leaves woolly at the base; stalk from three to ten inches high. Perennial: flowers in June and July: grows in the clefts of rocks, in dry pastures, among sand and stones, on the sea-shore, and upon the higher mountains of Wales and Scotland. *Engl. Bot.* vol. iii. pl. 175. *Engl. Bot.* vol. i. p. 215.

P. Corónopus. Buck's-horn Plantain. Leaves pinnatifid; flower-stalks round.——Root tapering: leaves cut laterally into numerous linear segments, hairy, lying flat on the ground; stalk from two to six inches high: capsule four-celled. Annual: flowers in June and July: grows in sandy and gravelly ground, chiefly near the sea; common. *Engl. Bot.* vol. xiii. pl. 892. *Engl. Fl.* vol. i. p. 216.

9. CENTUN'CULUS.

Calyx inferior, of one leaf, four cleft, permanent. Corolla of one petal, tubular, not permanent; tube nearly globular; limb four-cleft, expanded. Filaments thread-shaped, very long, arising from the mouth of the tube. Anthers roundish, two-celled. Germen oblong. Style thread-shaped, as long as the stamens. Stigma acute. Capsule globose, one-celled. Seeds numerous, minute, fixed to the central receptacle.

C. mínimus. Small Chaff-weed. Flowers sessile; corolla destitute of glands at the base.——From one to two inches high: leaves sessile, egg-shaped, smooth: flowers axillar, solitary, sessile, white. Annual: flowers in June: grows on moist sandy ground. *Engl. Bo.* vol. viii. pl. 531. *Engl. Fl.* vol. i. p. 217.

10. SANGUISO'RBA.

Calyx superior, of one leaf, deeply four-cleft, the segments egg-shaped, coloured. Corolla none. Filaments dilated upwards, as long as the calyx. Anthers roundish, two-celled. Germen inferior, four-cornered. Style thread-shaped, short. Stigma notched. Capsule four-cornered, one-celled, not bursting. Seeds one or two, elliptical.

S. officinális. Great Burnet. Spikes egg-shaped.——A hard, somewhat woody plant, about two feet high: stem erect, furrowed: leaves pinnate: leaflets heart-shaped, serrate, about four pairs, with a terminal one: spikes about an inch long, purple. Perennial: flowers in June and July: grows in moist pastures, chiefly in the north of England and south of Scotland. *Engl. Bot.* vol. xix. pl. 1312. *Engl. Fl.* vol. i. p. 218.

11. EPIME'DIUM.

Calyx inferior, of four small, egg-shaped, deciduous leaves. Corolla of four egg-shaped, equal, petals. Nectaries four, lying upon the petals, nearly as large. Filaments awl-shaped, close to the style. Anthers oblong, two-celled, opening from the base upwards. Germen oblong. Style roundish, as long as the stamens. Stigma simple. Pod oblong, tapering to a point, one-celled, two-valved. Seeds numerous, oblong.

E. alpínum. Barren-wort. Stem-leaf thrice ternate.——Root slender: stems simple, about a foot high, each bearing a single delicate leaf, which is thrice ternate, with heart-shaped fringed leaflets: petals dark-

red with pale-yellow nectaries. Perennial: flowers in May: grows in thickets in the mountainous parts of the north of England; rare. *Engl. Bot.* vol. vii. pl. 438. *Engl. Fl.* vol. i. p. 220.

12. CO'RNUS.

Calyx superior, very small, four-toothed, deciduous. Corolla of four, oblong, equal petals. Filaments awl-shaped, erect, longer than the petals. Anthers roundish, fixed sidewise. Germen inferior, roundish. Style thread-shaped, as long as the corolla. Stigma obtuse. Drupe roundish, dimpled. Nut oblong or heart-shaped, two-celled, with one kernel in each.

C. sanguínea. Wild Cornel. Dog-wood. Woody; branches straight; leaves opposite, green on both sides; cymes destitute of involucre.—A small tree or bush, five feet high: branches deep-red: leaves opposite, stalked, egg-shaped, smooth, turning red in autumn: flowers white, in terminal cymes: fruit dark purple. Flowers in June: grows in hedges and thickets. *Engl. Bot.* vol. iv. pl. 249. *Engl. Fl.* vol. i. p. 221.

C. suécica. Dwarf Cornel. Herbaceous; flowers umbellate, surrounded by a four-leaved involucre, the umbel springing from the fork of the stem.—Stems from four to six inches high, erect, leafy, forked: flowers dark purple, very small: leaves opposite, elliptical. Perennial: flowers in June and July: grows in heathy pastures. *Engl. Bot.* vol. v. pl. 310. *Engl. Bot.* vol. i. p. 221.

13. PARIETA'RIA.

Calyx inferior, of one leaf, divided into four deep segments, permanent. Corolla none. Filaments awl-shaped, longer than the calyx, recurved. Anthers of two distinct lobes. Germen egg-shaped. Style thread-shaped, erect. Stigma knobbed. Seed egg-shaped, flattened, invested with the enlarged calyx.

P. officinális. Common Pellitory of the Wall. Leaves between egg-shaped and lance-shaped; involucre of many egg-shaped leaflets.—Root somewhat woody: stems branched, four-cornered, hairy, reddish: leaves alternate, stalked: flowers numerous, small, axillar, growing in threes, the middle one pistilliferous only. Perennial: flowers through the summer: grows on old walls and among rubbish. This plant was formerly in repute as a medicine, but it does not seem to possess any remarkable qualities. *Engl. Bot.* vol. xiii. pl. 879. *Engl. Fl.* vol. i. p. 222.

14. ISNA'RDIA.

Calyx superior, bell-shaped, divided into four equal egg-shaped segments. Corolla none. Filaments awl-shaped, shorter than the calyx. Anthers oblong, simple. Germen inferior, four-cornered. Style cylindrical, long. Stigma knobbed. Capsule four-cornered, oblong, four-celled crowned with the calyx. Seeds numerous, oblong.

I. palústris. Marsh Isnardia. Roots long, thread-like stems bluntly four-cornered, leafy: leaves opposite, stalked, egg-shaped, bright

green: two acute, small bracteas: flowers axillar, solitary, sessile, green. Annual: flowers in July; floating in pools. Found at Buxted, Sussex, by Mr. W. Borrer. *Engl. Fl.* vol. i. p. 223.

15. ALCHEMI'LLA.

Calyx inferior, of one leaf, tubular, permanent; limb divided into eight segments, the four outer alternate ones smaller. Corolla none. Filaments awl-shaped, erect, small, standing on the mouth of the calyx. Anthers roundish. Germen egg-shaped, in the bottom of the calyx. Style thread-shaped, as long as the stamens, standing on the base of the germen. Stigma knobbed. Seed one, oval, compressed.

A. vulgáris. Common Lady's Mantle. Leaves lobed, plaited.——Root large, somewhat woody, with long fibres: stems about six inches high, round, hairy, branched, leafy: root-leaves numerous, on long stalks, kidney-shaped: stem-leaves much smaller, on short stalks: flowers yellowish green, in numerous corymbose clusters. Perennial: flowers in June and July: grows in pastures and by the side of brooks, rivers, and pools. *Engl. Bot.* vol. ix. pl. 597. *Engl. Fl.* vol. i. p. 224.

A. alpina. Alpine Lady's Mantle. Leaves with finger-like divisions, silky on the back.——Leaves divided into five or seven elliptical or inversely egg-shaped lobes, serrated towards the extremity, and covered with a beautiful silky down on the back. Perennial: flowers in July: grows on the high mountains of Wales, the north of England, and Scotland, by the sides of rills and streams; abundant. *Engl. Bot.* vol. iv. pl. 244. *Engl. Fl.* vol. i. p. 225.

A. arven'sis. Parsley Piert. Leaves flat, three-lobed, variously cut.——Root small, fibrous: stems three or four inches high, spreading, round, leafy: leaves alternate, on short stalks: flowers green: stamens generally four, sometimes one. Annual: flowers from May to August: grows in corn-fields and dry gravelly pastures; common. *Engl. Bot.* vol. xv. pl. 1011. *Engl. Fl.* vol. i. p. 225.

DIGYNIA.

16. BUFFO'NIA.

Calyx four-leaved, the leaves awl-shaped, keeled, equal. Corolla of four oval, erect, equal petals, shorter than the calyx. Filaments awl-shaped, shorter than the petals. Anthers roundish, two-celled. Germen superior, egg-shaped, compressed. Styles short, erect. Capsule oval, compressed, one-celled, two-valved. Seeds two, oval, compressed, tuberculated.

B. tenuifólia. Chickweed Toad-grass. Root fibrous: stem round, alternately branched: leaves awl-shaped, smooth, united by their broad sheathing bases: flowers small, white, solitary. Annual: flowers in June: Hounslow Heath; about Boston, Lancashire. *Engl. Bot.* vol. xix. pl. 1313. *Engl. Fl.* vol. i. p. 226.

TETRAGYNIA.

17. I'LEX.

Calyx inferior, one-leaved, four-toothed, permanent. Corolla wheel-shaped, of four elliptical segments or petals, much larger than the calyx. Filaments awl-shaped, shorter than the corolla. Anthers small, two-lobed. Germen roundish. Styles none. Stigmas four, obtuse, permanent. Berry globular, four-celled, each cell one-seeded. Seeds oblong, pointed.

T. Aquifólium. Common Holly. Leaves egg-shaped, acute, thorny.——An evergreen tree, with smooth greyish bark, shining thorny leaves, whitish flowers, and scarlet berries. Birdlime is procured from the bark by maceration: the wood is used in fineering, and for making handles of knives, &c.: it makes an impenetrable fence, and bears cropping, nor is its verdure ever observed to suffer from our most severe winters: flowers in May: grows in bushy places. *Engl. Bot.* vol. vii. pl. 496. *Engl. Fl.* vol. i. p. 228.

18. POTAMOGETON.

Calyx none. Corolla inferior, of four roundish equal petals, furnished with a claw. Filaments very short, flat. Anthers oblong, two-lobed. Germens four, superior, egg-shaped, acute. Style none. Stigmas obtuse, permanent. Seeds four, roundish, bulging on one side, flattened on the other.

P. nátans. Broad-leaved Pond-weed. Upper leaves between oblong and egg-shaped, stalked, leathery, floating; lower leaves linear, membranous, sessile.——Stem round, much branched: upper leaves brownish-green: spikes simple, raised above the water: the floating leaves afford an agreeable shade to fish, and the roots are a favourite food of swans. Perennial: flowers in July and August: grows in pools, ditches, canals, and rivers; common. *Engl. Bot.* vol. xxvi. pl. 1822. *Engl. Fl.* vol. i. p. 229.

P. heterophyl'lum. Various-leaved Pond-weed. Upper leaves elliptical, stalked, slightly leathery, floating; lower leaves lance-shaped, membranous, sessile.——Smaller than the last: upper leaves thinner: flower-stalks enlarged upwards: spikes dense. Perennial: flowers in July and August: grows in pools, ditches, canals, and rivers. *Engl. Bot.* vol. xviii. pl. 1285. *Engl. Fl.* vol. i. p. 230.

P. flúitans. Long-leaved, Floating Pond-weed. Upper leaves between egg-shaped and lance-shaped, stalked, leathery, floating; lower leaves lance-shaped, membranous, sessile.——Upper leaves less leathery, olive-coloured or reddish. Perennial: flowers in July and August: grows in ditches, ponds, and slow rivers. *Engl. Bot.* vol. xviii. pl. 1286. *Engl. Fl.* vol. i. p. 231.

P. perfoliátum. Perfoliate Pond-weed. Leaves heart-shaped, embracing the stem, uniform, all submersed.——Leaves all sessile, uniform, very pellucid, olive-coloured. Perennial: flowers in July and August: grows in slow rivers and ponds; very common. *Engl. Bot.* vol. iii. pl. 168. *Engl. Fl.* vol. i. p. 230.

P. dénsum. Close-leaved Pond-weed. Leaves egg-shaped, tapering to a point, opposite, crowded; stem forked; spike four-flowered.—— Fruit-stalk very short, in the fork of the stem: all the leaves are submersed and very close together. Perennial: flowers in July and August: grows in ditches, ponds, and slow rivers; not common. *Engl. Bot.* vol. vi. pl. 397. *Engl. Fl.* vol. i. p. 231.

P. lúcens. Shining Pond-weed. Leaves between elliptical and lance-shaped, pointed, stalked, membranous, sessile; spike dense, many-flowered.——Leaves large, olive-green, with undulated margins, and beautifully veined: spike two inches long, of very numerous, green flowers. Perennial: flowers in June and July: grows in ditches, ponds, lakes, and slow rivers; common. *Engl. Bot.* vol. vi. pl. 376. *Engl. Fl.* vol. i. p. 232.

P. lanceolátum. Lance-shaped Pond-weed. Leaves lance-shaped, membranous, tapering at the base, sessile; spikes dense, few-flowered. ——Leaves marked with chain-like reticulations near the ribs: spike small, short. Perennial: flowers in July and August; grows in pools and slow-streams; rare. *Engl. Bot.* vol. xxviii. pl. 1985. *Engl. Fl.* vol. i. p. 233.

P. crispum. Curled Pond-weed. Leaves lance-shaped, waved, serrate, alternate, the upper opposite.——Leaves sessile, bright green: flowers yellowish-green, in short, loose spikes. Perennial: flowers in June and July: grows in ditches, pools, and rivulets; common. *Engl. Bot.* vol. xv. pl. 1012. *Engl. Fl.* vol. i. p. 233.

P. compres'sum. Flat-stalked Pond-weed. Leaves linear, obtuse; stem flattened.——Leaves sessile, alternate: flowers brownish, in short spikes. Perennial: flowers in June and July: grows in ditches and slow streams. *Engl. Bot.* vol. vi. pl. 418. *Engl. Fl.* vol. i. p. 234.

P. gramin'eum. Grassy Pond-weed. Leaves linear, tapering towards the base, alternate sessile; stem round, forked; flower-stalks little longer than the spikes.——Leaves bright green, grassy-looking: spikes egg-shaped, dense. Perennial: flowers in July: grows in ditches and streams. *Eng. Bot.* vol. xxxii. pl. 2253. *Engl. Fl.* vol. i. p. 235.

P. pusil'lum. Small Pond-weed. Leaves linear, three-ribbed, opposite and alternate, spreading at the base; stem round; flower-stalks many times longer than the spikes.——Leaves very narrow, pointed, much expanded at the base: spikes nearly globular. Perennial: flowers in July: grows in ponds, ditches, and slow streams; not uncommon. *Engl. Bot.* vol. iii. pl. 215. *Engl. Fl.* vol. i. p. 236.

P. pectinatum. Fennel-leaved Pond-weed. Leaves bristle-shaped, one-ribbed, parallel, closely set in two rows; spikes interrupted.—— Leaves alternate, bright green: spikes few, with interruptions. Perennial: flowers in July: grows in ditches, pools, and rivers. *Engl. Bot.* vol. v. pl. 323. *Engl. Fl.* vol. i. p. 237.

19. RUPPIA.

Calyx none. Corolla none. Anthers four, sessile, equal, roundish. Germens four, egg-shaped, close together. Styles none. Stigmas

obtuse. Seeds four, egg-shaped, obliquely pointed, each elevated on a long stalk.

R. marítima. Sea Tassel-grass. The whole plant submersed. Roots fibrous, tufted; stem long, slender, round, much branched, leafy.—— Leaves linear, alternate: spikes two-flowered, on short axillar stalks. Perennial: flowers in August and September: grows in salt-water ditches and pools; not uncommon. *Engl. Bot.* vol. ii. pl. 136. *Engl. Fl.* vol. i. p. 238.

20. SAGI'NA.

Calyx inferior, four-leaved. Petals four, egg-shaped, entire, spreading, shorter than the calyx; sometimes wanting. Filaments hair-like, ascending, shorter than the calyx. Anthers roundish, two-lobed. Germen superior, egg-shaped. Styles awl-shaped, short, spreading. Stigmas obtuse, downy. Capsule egg-shaped, one-celled, four-valved. Seeds numerous, very small, stalked, and attached to a central receptacle.

S. procúmbens. Procumbent Pearl-wort. Stems procumbent; leaves minutely pointed; petals much shorter than the calyx.——Stems from two to four inches long, spreading, leafy: leaves linear, three-ribbed, smooth; flowers drooping: petals white. Perennial: flowers in June and July: grows in dry, gravelly, or sandy soil; common. *Engl. Bot.* vol. xiii. pl. 880. *Engl. Fl.* vol. i. p. 239.

S. marítima. Sea Pearl-wort. Stems nearly erect, smooth; leaves blunt; petals none.——Stems two or three inches high, spreading at the bottom, branched, leafy: leaves fleshy, linear, smooth. Annual: flowers from May to August: grows on the sea-coast; not uncommon. *Engl. Bot.* vol. xxxi. pl. 2195. *Engl. Fl.* vol. i. p. 240.

S. apétala. Small Annual Pearl-wort. Stems nearly erect, hairy; leaves bristle-pointed, fringed; petals generally wanting.——Stems two or three inches long, spreading at the base, leafy, covered with spreading hairs: leaves linear, tipped with a bristle, and fringed at the edges: petals sometimes present, very short, white, generally wanting. Annual: flowers from May to August: grows in dry gravelly or sandy places, on walls, rocks, &c.; common. *Engl. Bot.* vol. xiii. pl. 881. *Engl. Fl.* vol. i. p. 240.

21. MŒ'NCHIA.

Calyx inferior, four-leaved. Petals four, lance-shaped, pointed, converging, permanent. Filaments hair-like, ascending, shorter than the petals. Anthers roundish, two-lobed. Germen superior, egg-shaped. Styles very short, spreading. Stigmas obtuse, downy. Capsule cylindrical, one-celled, one-valved. Seeds numerous, kidney-shaped, stalked and attached to a common receptacle.

S. erécta. Upright Mœnchia, Least Stichwort.——Root fibrous: stems erect, three or four inches high, round, leafy: leaves opposite, sessile, between linear and lance-shaped: petals white. Annual: flowers in May: grows in moist gravelly places. *Engl. Bot.* vol. ix. pl. 609. *Engl. Fl.* vol. i. p. 241.

22. TILLÆ'A.

Calyx inferior, of one leaf, with three or four large, egg-shaped segments. Petals three or four, egg-shaped, acute, rather smaller than the calyx. Filaments three or four, simple, awl-shaped, erect, shorter than the corolla. Anthers roundish, two-celled. Germens three or four, egg-shaped, superior. Styles very short. Stigmas obtuse. Capsules oblong, pointed, reflected, one-celled, two-valved. Seeds egg-shaped, two in each capsule.

F. muscósa. Mossy Tillæa, or *Red-shanks.* Stems procumbent; flowers sessile, three-cleft.——From one to two inches high: root fibrous: stems at first nearly erect, soon becoming procumbent, round, leafy, red: leaves oval, opposite, succulent, reddish, smooth: petals white, tinged with red. Perennial: flowers in May and June: grows on sandy heaths, in Norfolk and Suffolk. *Eng. Bot.* vol. ii. pl. 116. *Eng. Fl.* vol. i. p. 242.

23. RADI'OLA.

Calyx inferior, of one leaf, with four three-cleft segments. Petals four, inversely egg-shaped, as long as the calyx. Filaments four, awl-shaped, as long as the petals. Anthers roundish, two-lobed. Germen superior, roundish, four-lobed. Styles four, hair-like, very short, permanent. Stigmas knobbed. Capsule roundish, eight-valved, eight-celled. Seeds solitary, egg-shaped, polished.

R. Millegrána. All-seed.——From one to two inches high: root fibrous: stem erect, repeatedly forked, leafy: leaves egg-shaped, sessile, opposite: flowers axillar, stalked, white. Annual: flowers in July and August: grows in gravelly and sandy soil, on heaths, &c.; not very uncommon. *Engl. Bot.* vol. xiii. pl. 893. *Engl. Fl.* vol. i. p. 243.

Class V. PENTANDRIA.

Plants bearing Flowers with Five Stamens.

Order I. MONOGYNIA. *One Pistil.*

* *Flowers of one petal, inferior, with two or four naked seeds.*

10. E'CHIUM. *Corolla* irregular, its throat dilated and naked. *Stigma* deeply cleft.
5. PULMONA'RIA. *Corolla* funnel-shaped, its throat naked. *Calyx* prismatic, five-cleft.
2. LITHOSPER'MUM. *Corolla* funnel-shaped, its throat naked. *Calyx* with five deep clefts.
6. SYM'PHYTUM. *Corolla* closed with awl-shaped valves; its limb bell-shaped.
7. BORA'GO. *Corolla* closed with awl-shaped or notched valves; its limb wheel-shaped.

9. LYCOP'SIS. *Corolla* closed with concave obtuse valves; funnel-shaped, with a bent tube. *Seeds* concave at the base.
3. ANCHU'SA. *Corolla* closed with concave obtuse valves; funnel-shaped, with the tube straight. *Seeds* concave at the base.
8. ASPERU'GO. *Corolla* closed with concave obtuse valves; salver-shaped. *Calyx* of the fruit compressed, with jagged, parallel lobes.
4. CYNOGLOS'SUM. *Corolla* half-closed with rounded valves; funnel-shaped. *Seeds* depressed, imperforate, borne upon a central column.
1. MYOSO'TIS. *Corolla* half-closed with rounded valves; salver-shaped; lobes obtuse. *Seeds* perforated at the base, borne by the calyx.

** *Flowers of one petal, inferior, with numerous seeds inclosed in a seed-vessel.*

16. ANAGAL'LIS. *Capsule* one-celled, bursting all round. *Corolla* wheel-shaped. *Stamens* hairy.
15. LYSIMA'CHIA. *Capsule* one-celled, ten-valved. *Corolla* wheel-shaped.
12. CY'CLAMEN. *Capsule* one-celled, pulpy within. *Corolla* wheel-shaped, reflected. *Stigma* acute.
11. PRI'MULA. *Capsule* one-celled, opening with ten teeth. *Corolla* salver-shaped, with a cylindrical tube, and open throat. *Stigma* globular.
14. HOTTO'NIA. *Capsule* one-celled, opening with five teeth. *Corolla* salver-shaped. *Stamens* from the margin of the tube. *Stigma* globular.
13. MENYAN'THES. *Capsule* one-celled. *Corolla* hairy. *Stigma* divided.
30. ERYTHRÆ'A. *Capsule* incompletely two-celled. *Corolla* salver-shaped. *Anthers* after flowering spirally twisted.
27. HYOSCY'AMUS. *Capsule* two-celled, with a lid. *Corolla* funnel-shaped. *Stigma* knobbed.
26. VERBAS'CUM. *Capsule* two-celled. *Corolla* wheel-shaped, irregular. *Stigma* obtuse. *Stamens* declining.
18. CONVOL'VULUS. *Capsule* two-celled, each cell two-seeded. *Corolla* bell-shaped, plaited. *Stigma* cleft.
19. POLEMO'NIUM. *Capsule* three-celled. *Corolla* deeply five-cleft, the tube closed by five valves. *Stamens* inserted upon the valves.
17. AZA'LEA. *Capsule* five-celled. *Corolla* bell-shaped. *Stamens* inserted upon the receptacle.
40. VI'NCA. *Follicles* two, erect. *Corolla* salver-shaped, oblique. *Seeds* simple.
29. SOLA'NUM. *Berry* two-celled. *Capsule* wheel-shaped. *Anthers* with two pores.
28. A'TROPA. *Berry* two-celled. *Corolla* bell-shaped. *Stamens* distant. *Anthers* heart-shaped.

*** *Flowers of one petal, superior.*

31. SAM'OLUS. *Capsule* one-celled, with five recurved valves. *Corolla* funnel-shaped, five-cleft, with scales between the segments.

32. JASI'ONE. *Capsule* two-celled, opening at the top. *Corolla* wheel-shaped, deeply five-cleft. *Stigma* club-shaped. *Anthers* united at the base.
31. PHYTEU'MA. *Capsule* two- or three-celled, opening laterally. *Corolla* wheel-shaped, deeply five-cleft. *Stigma* two- or three-cleft.
33. LOBE'LIA. *Capsule* two- or three-celled. *Corolla* irregular, split longitudinally on the upper side. *Stigma* knobbed, hairy.
30. CAMPA'NULA. *Capsule* two- or three-celled, opening with lateral pores. *Corolla* bell-shaped. *Stigma* two- or three-cleft, revolute.
32. LONICE'RA. *Berry* with one or more cells, each cell many-seeded. *Corolla* irregular.

(*Rubia peregrina.*)

**** *Flowers of five petals, inferior.*

33. RHAM'NUS. *Berry* three-celled, roundish. *Calyx* tubular, bearing the petals.
34. EUO'NYMUS. *Capsule* of four or five cells. *Seeds* with a fleshy coat. *Calyx* flat.
24. IMPATIENS. *Capsule* five-celled, five-valved. *Corolla* irregular. *Calyx* of two leaves.
25. VI'OLA. *Capsule* one-celled, three-valved. *Corolla* irregular, spurred. *Calyx* of five leaves, extended at the base.

***** *Flowers of five petals, superior.*

35. RI'BES. *Berry* many-seeded. *Calyx* bearing the petals. *Style* cleft.
36. HE'DERA. *Berry* five-seeded. *Calyx* surrounding the germen. *Style* simple.

****** *Flowers without petals.*

38. GLAUX. *Capsule* superior, five-seeded. *Calyx* of one leaf, coloured.
37. ILLE'CEBRUM. *Capsule* superior, one-seeded. *Calyx* of five leaves, cartilaginous.
39. THE'SIUM. *Drupe* inferior, dry. *Calyx* leathery, five-cleft, bearing the stamens.

Order II. DIGYNIA. *Two Pistils.*

* *Flowers of one petal, inferior.*

47. GENTIA'NA. *Capsule* one-celled. *Corolla* tubular at the base bell-shaped or funnel-shaped, destitute of nectariferous pores.
46. CUS'CUTA. *Capsule* two-celled, bursting all around. *Corolla* bell-shaped.

** *Flowers without a corolla. Seed solitary.*

43. BE'TA. *Seed* kidney-shaped, imbedded in the fleshy calyx.
42. CHENOPO'DIUM. *Seed* lenticular, superior to the five-cleft, persistent *calyx.*
44. SA'LSOLA. *Capsule* closed, imbedded in the fleshy *calyx.* Seed with a spiral embryo.
41. HERNIA'RIA. *Capsule* closed, membranous, invested by the *calyx. Stamens* with five imperfect filaments.

45. UL'MUS. *Capsule* closed, membranous, compressed, margined, superior.

(*Polygonum amphibium.*)

*** *Flowers of five petals, superior, two-seeded.*

A. *Umbels and Umbellules furnished with involucres, consisting of bracteas.*

48. ERYN'GIUM. *Fruit* egg-shaped, covered with straight bristles. *Petals* oblong, equal, inflected, undivided. *Flowers* aggregate, forming a head.

49. HYDROCOTYLE. *Fruit* round, compressed laterally, striated. *Petals* egg-shaped, acute, equal. *Flowers* in a simple umbel.

50. SANI'CULA. *Fruit* egg-shaped, covered with hooked bristles. *Petals* lance-shaped, inflected, nearly equal. *Umbellules* clustered, the central flowers destitute of stamens and pistils.

82. HERA'CLEUM. *Fruit* elliptical, compressed, striated. *Petals* inversely heart-shaped, radiant. *Styles* pyramidal at the base.

65. ŒNAN'THE. *Fruit* oblong, somewhat spongy, ribbed. *Petals* inversely heart-shaped, radiant, very unequal. *Styles* slender, enlarged at the base.

51. ECHINO'PHORA. *Fruit* egg-shaped, embedded in the enlarged, armed receptacle. *Petals* inversely heart-shaped, unequal. *Styles* erect, awl-shaped.

52. CAU'CALIS. *Fruit* oblong, compressed transversely. *Seeds* with four rows of ascending awl-shaped, hooked prickles. *Petals* inversely heart-shaped, unequal.

58. DAU'CUS. *Fruit* oblong, compressed transversely. *Seeds* with four rows of flat prickles and rough intermediate ribs. *Petals* inversely heart-shaped, unequal.

80. PEUCE'DANUM. *Fruit* nearly orbicular, crowned with the calyx and styles. *Petals* inversely heart-shaped, all nearly equal. *Styles* very short, greatly dilated at the base.

64. CONI'UM. *Fruit* egg-shaped, with ten acute ribs. *Petals* inversely heart-shaped, slightly unequal. *Styles* a little tumid at the base.

59. BU'NIUM. *Fruit* egg-shaped, strongly ribbed. *Petals* inversely heart-shaped, equal. *Styles* awl-shaped, much swelled at the base.

60. SI'UM. *Fruit* egg-shaped or orbicular, ribbed. *Petals* inversely heart-shaped, or egg-shaped, equal. *Styles* cylindrical, swelling a little at the base.

61. SI'SON. *Fruit* egg-shaped or nearly orbicular, ribbed. *Petals* elliptical or inversely heart-shaped, involute at the point, equal. *Styles* very short and thick.

79. SELI'NUM. *Fruit* elliptical, ribbed, crowned with the calyx and style. *Petals* inversely heart-shaped, involute, equal. *Styles* with swelled hemispherical bases.

66. CRITH'MUM. *Fruit* elliptical, ribbed, crowned. *Petals* elliptical, acute, incurved, equal. *Styles* short and thick, with swelled bases.

72. LIGUS'TICUM. *Fruit* oblong, winged. *Petals* elliptical, flattish, contracted at both ends, equal. *Styles* thick, tumid at the base.

76. ME'UM. *Fruit* oblong, ribbed. *Petals* inversely egg-shaped with an inflected point, equal. *Styles* swelled at the base.

77. CNI'DIUM. *Fruit* egg-shaped, acute, with sharp ribs. *Petals*

inversely heart-shaped or egg-shaped, equal. *Styles* hemispherical at the base.

78. BUPLEU'RUM. *Fruit* egg-shaped, obtuse, with sharp ribs. *Petals* wedge-shaped, very short, involute, equal. *Styles* very short, swelled at the base.

75. ATHAMAN'TA. *Fruit* egg-shaped, ribbed, hairy. *Petals* inversely heart-shaped, broadly pointed, equal. *Styles* short with a tumid base.

83. TORDYLI'UM. *Fruit* nearly orbicular, striated. *Petals* inversely heart-shaped, with an inflected point, unequal. *Styles* thread-shaped, swelled at the base.

B. *Umbellules furnished with involucral bracteas, umbels naked.*

62. CICU'TA. *Fruit* nearly orbicular, with six double ribs. *Petals* egg-shaped, or heart-shaped, nearly equal. *Styles* slightly swelled at the base.

70. IMPERATO'RIA. *Fruit* orbicular, with six ribs. *Petals* inversely heart-shaped, rather irregular. *Styles* egg-shaped and swelled at the base.

71. ANGE'LICA. *Fruit* roundish, with three wings on each side. *Petals* lance-shaped, equal, flattish, with the point inflected. *Styles* short, erect, broad and swelled at the base.

54. ANTHRIS'CUS. *Fruit* egg-shaped, covered with short incurved bristles. *Petals* inversely heart-shaped, equal. *Styles* awl-shaped, tumid at the base.

53. TORI'LIS. *Fruit* egg-shaped, ribless, covered with ascending bristles. *Styles* awl-shaped, short, very broad at the base.

63. ÆTHU'SA. *Fruit* egg-shaped, with ten rounded ribs. *Petals* inversely heart-shaped, deeply lobed, with an acute inflected point. *Styles* short, swelled and egg-shaped at the base.

57. CHÆROPHYL'LUM. *Fruit* smooth, ribless. *Petals* inversely heart-shaped, with an inflected point, somewhat unequal. *Styles* short, awl-shaped, tumid at the base.

56. MYR'RHIS. *Fruit* narrow lance-shaped, deeply furrowed, smooth. *Petals* uniform, inversely heart-shaped, with an inflected taper point. *Styles* awl-shaped, very tumid at the base.

55. SCAN'DIX. *Fruit* elliptical, ribbed, somewhat bristly. *Petals* unequal, undivided, tapering at the base. *Styles* short, swelled at the base.

C. *Umbels and Umbellules without bracteas.*

68. A'PIUM. *Fruit* roundish, ribbed. *Petals* roundish, with an inflected point, equal. *Styles* greatly swelled at the base.

76. PIMPINEL'LA. *Fruit* roundish, ribbed. *Petals* inversely heart-shaped, nearly equal. *Styles* thread-like, as long as the fruit.

67. SMYR'NIUM. *Fruit* roundish, ribbed. *Petals* lance-shaped, incurved, equal. *Styles* swelled and depressed at the base.

81. PASTINA'CA. *Fruit* broadly elliptical, ribbed. *Petals* broadly lance-shaped, involute, equal. *Styles* very short, erect, with knobbed stigmas.

69. ÆGOPO'DIUM. *Fruit* elliptical, ribbed. *Petals* inversely heart-shaped, unequal. *Styles* egg-shaped at the base.

74. CA'RUM. *Fruit* oblong, ribbed. *Petals* inversely heart-shaped, unequal. *Styles* swelled at the base, subsequently elongated.

Order III. TRIGYNIA. *Three Pistils.*

* *Flowers superior.*

84. VIBU'RNUM. *Corolla* five-cleft. *Berry* one-seeded.
85. SAMBU'CUS. *Corolla* five-cleft. *Berry* two-seeded.

** *Flowers inferior.*

88. CORRIGI'OLA. *Petals* five. *Seed* one, naked, triangular.
86. STAPHYLE'A. *Petals* five. *Capsules* two or three, inflated.
87. TAM'ARIX. *Petals* five. *Capsule* three-valved. *Seeds* numerous, downy.

(Chenopodium. Stellaria media.)

Order IV. TETRAGYNIA. *Four Pistils.*

89. PARNAS'SIA. *Petals* five. *Nectaries* five, fringed with bristles bearing globes. *Capsule* four-valved.

Order V. PENTAGYNIA. *Five Pistils.*

91. LIN'UM. *Petals* five. *Capsule* ten-celled.
92. SIBBAL'DIA. *Petals* five. *Seeds* five, naked. *Calyx* ten-cleft.
90. STA'TICE. *Petals* five. *Seed* one, covered with the base of the *calyx.*

(Spergula. Cerastium.)

Order VI. HEXAGYNIA. *Six Pistils.*

93. DRO'SERA. *Petals* five. *Capsule* three-valved, many-seeded.

Order VII. POLYGYNIA. *Numerous Pistils.*

94. MYOSU'RUS. *Petals* five, with tubular honey-bearing claws. *Seeds* naked. *Calyx* spurred at the base.

(Ranunculus hederaceus.)

PENTANDRIA.—MONOGYNIA.

1. MYOSO'TIS.

Calyx inferior, of one leaf, deeply five-cleft; segments acute, equal. Corolla of one petal, salver-shaped; mouth half-closed with five small valves. Filaments very short. Anthers small, oblong. Germens four. Style thread-shaped, central, as long as the tube. Stigma obtuse. Seeds egg-shaped, pointed, smooth.

M. palústris. Great Water Scorpion-grass. Forget-me-not. Calyx funnel-shaped, with short, broad segments; leaves oblong, roughish, with close bristles; root creeping.——Roots very long, creeping: stem from six to twelve inches high: clusters many-flowered: two or three together: limb of the corolla sky-blue, the valves of the mouth yellow. Perennial: flowers in June and July: grows in marshy places and ditches; common. *Engl. Bot.* vol. xxviii. pl. 1973. *Engl. Fl.* vol. i. p. 250. *Fl. Scot.* p. 67.

M. cæspitósa. Tufted Water Scorpion-grass. Calyx funnel-shaped, with broad, spreading segments; leaves covered with erect bristles; root fibrous.——Stems about a foot high, rooting at the base: corolla paler and smaller than in the last species: the whole plant weaker. Perennial: flowers in June and July: grows in watery places; common. *Engl. Fl.* vol. i. p. 251. *Brit. Fl.* p. 83.

M. alpes'tris. Rock Scorpion-grass. Calyx deeply five-cleft, covered with erect hairs; leaves hairy, root-leaves half the length of the stalks; root fibrous.——Stems from three to five inches high: clusters dense: corolla large and blue. Perennial: flowers in July and August: grows on Ben Lawers and other Highland mountains. *Engl. Bot.* vol. xxxvi. pl. 2559. *Engl. Fl.* vol. i. p. 253. *Fl. Scot.* p. 66.

M. sylvática. Wood Scorpion-grass. Tube of the calyx covered with hooked bristles, segments with erect hairs; leaves hairy, oblong; clusters very long, lax; root fibrous.——From twelve to eighteen inches high: leaves obtuse, covered and fringed with soft, spreading hairs: corolla bright blue, small. Perennial: flowers in June and July: grows in woods and dry shady places in general; common. *Engl. Fl.* vol. i. p. 252. *Fl. Scot.* p. 66.

M. arven'sis. Field Scorpion-grass. Calyx deeply five-cleft, covered with spreading hairs; leaves between oblong and lance-shaped, hairy; clusters long, stalked, with one remote axillar flower.——Root fibrous: stem from three to six inches high: corolla small, bright blue. Annual: flowers in June and July: grows in dry waste places; abundant. *Eng Fl.* vol. i. p. 253. *Fl. Scot.* p. 67.

M. versicolor. Yellow and blue Scorpion-grass. Calyx deeply five-cleft, covered with spreading hairs; leaves narrow oblong, hairy; clusters long, stalked, without a remote flower.——Root fibrous: stem three or four inches high: corolla small, blue with a yellow throat. Annual: flowers in June and July: grows in dry waste places, on walls, &c.; common. *Engl. Bot.* pl. 480. fig. 1. *Eng. Fl.* vol. i. p. 254. *Fl. Scot.* p. 67.

2. LITHOSPER'MUM.

Calyx inferior, of one leaf, oblong, deeply five-cleft; segments acute, equal, nearly erect. Corolla of one petal, funnel-shaped; tube open. Filaments very short. Anthers oblong, concealed in the tube. Germens four. Style thread-shaped, shorter than the tube. Stigma obtuse, notched. Seeds four, egg-shaped, pointed, hard.

L. officinále. Common Gromwell. Graymill. Corolla little longer than the calyx; leaves lance-shaped, rather acute.——Root tapering, whitish: stem about two feet high: leaves greyish-green: corolla pale yellow. Perennial: flowers in May: grows in dry gravelly places; common. *Engl. Bot.* vol. ii. pl. 134. *Engl. Fl.* vol. i. p. 256. *Fl. Scot.* p. 68.

L. arven'se. Corn Gromwell. Corolla little longer than the calyx; leaves narrow, lance-shaped, obtuse.——Root tapering, with a purplish-red bark: stem about a foot high: leaves bright green: corolla white. Annual: flowers in May and June: grows in corn-fields and waste places; common. *Engl. Bot.* vol. ii. pl. 128. *Engl. Fl.* vol. i. p. 256. *Fl. Scot.* p. 68.

L. púrpuro-cærúleum. Creeping or *Purple Gromwell.* Corolla much longer than the calyx; leaves lance-shaped.——Root woody, blackish: stems several, from twelve to eighteen inches long: some barren, creeping, and rooting: others erect: corolla violet-blue. Perennial: flowers in April and May: grows in mountainous and woody pastures in England; rare. *Engl. Bot.* vol. ii. pl. 117. *Engl. Fl.* vol. i. p. 257.

S. marítimum. Sea Gromwell. Sea Bugloss. Leaves egg-shaped, sprinkled with callous dots; stems all procumbent.——Root fleshy, tapering: stems numerous, from one to two feet long: leaves somewhat fleshy, smooth: flowers in terminal leafy clusters: corolla twice as long as the calyx, of a beautiful purple. Perennial: flowers in July and August: grows on gravelly beaches on the sea-shore, in the north of England, and in Scotland. *Engl. Bot.* vol. vi. p. 368. *Engl. Fl.* vol. i. p. 287. *Fl. Scot.* p. 68.

3. ANCHU'SA.

Calyx inferior, of one leaf, cylindrical, deeply five-cleft; segments acute. Corolla of one petal, funnel-shaped; tube straight, tumid below; mouth closed with five erect, obtuse, hairy, converging valves. Filaments very short. Anthers oblong, concealed by the valves. Germens four, roundish. Style cylindrical, short. Stigma cleft. Seeds four, roundish, wrinkled, each hollowed out at the base.

A. sempervirens. Ever-green Alkanet. Flower-stalks axillar, each bearing two dense spikes, with an intermediate flower; leaves egg-shaped, acute.——Stems from twelve to eighteen inches high: root-leaves large, remaining green all the winter, stalked, the rest sessile, all egg-shaped: limb of the corolla brilliant sky-blue, the valves white and downy. Perennial: flowers in May and June: grows by roads and among rubbish; not very common. *Engl. Bot.* vol. i. pl. 45. *Engl. Fl.* vol. i. p. 259.

4. CYNOGLOS'SUM.

Calyx inferior, of one leaf, deeply five-cleft; segments slightly acute. Corolla of one petal, funnel-shaped, little longer than the calyx; tube cylindrical, short; mouth half-closed with five horizontal valves. Filaments short. Anthers roundish. Germens four, depressed. Style awl-shaped, central, longish. Stigma small, notched. Seeds four, roundish, imperforate at the base, attached to a central receptacle.

C. officinále. Common Hound's-tongue. Stamens shorter than the corolla; stem-leaves broadly lance-shaped, sessile, downy.——Whole plant dull-green, downy and soft: stem two feet high: root-leaves large, tapering at both ends: clusters terminal, panicled: corolla dull crimson. This plant is suspected of possessing narcotic properties; its smell is very disagreeable, and greatly resembles that of mice. Perennial: flowers in May and June: grows by road-sides and among rubbish; common. *Engl. Bot.* vol. xxiii. pl. 1642. *Engl. Fl.* vol. i. p. 261. *Fl. Scot.* p. 69.

C. sylváticum. Green-leaved Hound's-tongue. Stamens shorter than the corolla; leaves lance-shaped, the upper ones embracing the stem, smooth above, hairy beneath.——Whole plant bright green: leaves

covered on the back part with callous warts: flowers dull blue. Biennial: flowers in June: grows in shady lanes; rare. Essex, Kent, Surrey, Worcestershire, Oxfordshire, Carse of Gowrie, &c. *Engl. Bot.* vol. xxiii. pl. 1643. *Engl. Fl.* vol. i. p. 261. *Fl. Scot.* p. 69.

5. PULMONA'RIA.

Calyx inferior, of one leaf, prismatic, five-cornered, with five equal segments. Corolla of one petal, funnel-shaped; tube cylindrical, long; mouth naked and open. Filaments very short. Anthers oval, erect. Germens four, roundish. Style thread-shaped, short. Stigma small, notched. Seeds four, globular, hairy.

P. officinalis. Common Lung-wort. Leaves egg-shaped.——Root fibrous: stems about a foot high, erect, leafy, hairy: leaves egg-shaped, hairy, generally speckled with white on the upper side, the lower on long bordered stalks, the upper sessile: flowers violet blue. Perennial: flowers in May: grows in woods and shady lanes; rare. *Engl. Bot.* vol. ii. pl. 118. *Engl. Fl.* vol. i. p. 262.

P. angustifolia. Narrow-leaved Lung-wort. Leaves lance-shaped. ——Taller than the former, and differing chiefly in the form of the leaves, which are seldom spotted. Perennial: flowers in May and June: grows in woods and thickets; rare. *Engl. Bot.* vol. xxiii. pl. 1628. *Engl. Fl.* vol. i. p. 263.

6. SYM'PHYTUM.

Calyx inferior, of one leaf, five-cleft; segments acute. Corolla of one petal, bell-shaped; mouth closed by five lance-shaped, fringed valves. Filaments short. Anthers arrow-shaped, concealed by the valves. Germens four, abrupt. Style club-shaped, long. Stigma undivided. Seeds four, egg-shaped.

S. officinale. Common Comfrey. Leaves between egg-shaped and lance-shaped, decumbent, covered with fine hairs.——Root oblong, fleshy, black: stems three feet high, hairy, winged: flowers yellowish-white. A variety has purple flowers. Perennial: flowers in May and June: grows on the banks of rivers and ditches. The roots are glutinous and mucilaginous, and have been used for coughs. *Engl. Bot.* vol. xii. pl. 817. *Eng. Fl.* vol. i. p. 264. *Fl. Scot.* p. 69.

S. tuberósum. Tuberous Comfrey. Leaves egg-shaped, slightly decurrent, covered with coarse hairs, the upper ones opposite.——Root white externally: flowers drooping, yellowish-white, tinged with green. Perennial: flowers in July: grows on the banks of rivers and ditches. *Engl. Bot.* vol. xxi. pl. 1502. *Engl. Fl.* vol. i. p. 264. *Fl. Scot.* p. 70.

7. BORA'GO.

Calyx inferior, of one leaf, deeply five-cleft. Corolla of one petal, wheel-shaped; mouth bordered with five short notched valves, or with awl-shaped valves, or with both. Filaments awl-shaped. Anthers arrow-shaped or oblong. Germens four, style cylindrical. Stigma knobbed. Seeds four, egg-shaped, wrinkled.

B. officinális. Common Borage. Leaves egg-shaped, alternate;

mouth of the corolla with a double row of valves, the innermost awl-shaped, bearing the stamens.——Whole plant covered with very pungent bristles: flowers numerous, in terminal bunches: corolla brilliant blue, large. The flowers were supposed to be cordial, and were infused in drinks; but quackeries of this kind are now out of fashion. Perennial: flowers in June and July: grows in waste ground, near houses. *Engl. Bot.* vol. i. pl. 36. *Engl. Fl.* vol. i. p. 265.

8. ASPERU'GO.

Calyx inferior, of one leaf, deeply five-cleft, subsequently enlarged, forming two erect lobes. Corolla of one petal, funnel-shaped; mouth nearly closed by five rounded horizontal valves. Filaments very short. Anthers small, roundish. Germens four, compressed. Style erect, long. Stigma blunt. Seeds four, oblong, compressed, attached to a central column in pairs.

A. procumbens. Trailing Catchweed. Calyx when in fruit compressed. ——Stems prostrate, square, leafy, their angles prickly: leaves generally in threes, elliptical, dark green, covered with bristles: corolla small, blue. Annual: flowers in June and July: grows in waste ground; rare.

9. LYCOP'SIS.

Calyx inferior, of one leaf, deeply five-cleft. Corolla, of one petal, funnel-shaped; tube twice bent; mouth closed with five rounded, hairy valves. Filaments very small. Anthers oblong. Germens four. Style thread-shaped, short. Stigma blunt, notched. Seeds four, egg-shaped, cornered.

L. arvénsis. Small Bugloss. Leaves spear-shaped, waved, very bristly.——The whole plant very rough and bristly: stems erect, roundish, about a foot high: corolla sky-blue, with white valves. Annual: flowers in June and July: grows in corn-fields and by road-sides. *Engl. Bot.* vol. xiv. pl. 938. *Engl. Fl.* vol. i. p. 268.

10. E'CHIUM.

Calyx inferior, of one leaf, permanent, five-cleft; the segments awl-shaped. Corolla of one petal, bell-shaped; tube very short; limb gradually widening upwards; segments five, the two uppermost longest, the lower smallest; mouth open and naked. Filaments as long as the corolla, awl-shaped, unequal. Anthers oblong, fixed sidewise. Germens four, style thread-shaped, long. Summit blunt, cleft. Seeds four, roundish, wrinkled, obliquely pointed.

E. vulgáre. Common Viper's Bugloss. Stem rough with bristles and tubercles; stem-leaves lance-shaped, bristly; spikes lateral, hairy, deflected.——Stems from one to two feet high, round, bristly: leaves alternate, entire, dull green; the lowest stalked, all bristly: flowers large, crowded, beautiful, bright purplish blue. Perennial: flowers in June and July: grows in corn-fields and waste ground. *Engl. Bot.* vol. iii. pl. 181. *Engl. Fl.* vol. i. p. 269.

11. PRI'MULA.

Calyx inferior, of one leaf, tubular, with five angles and five teeth, erect, permanent. Corolla of one petal, salver-shaped; tube cylindrical, as long as the calyx; limb spreading, with five somewhat deep inversely heart-shaped segments; mouth open. Filaments very short, in the throat. Anthers pointed, erect, within the tube. Germen globular. Style thread-shaped, as long as the calyx. Stigma globular. Capsule cylindrical, one-celled, opening at the top with ten acute teeth. Seeds numerous, roundish, attached to a central, oblong receptacle.

P. vulgáris. Common Primrose. Leaves wrinkled, toothed; stalks single-flowered; limb of the corolla flat.——Leaves numerous, radical, oblong, unequally toothed, soft, reticulated, gradually tapering downwards into short foot-stalks: flowers numerous, large sulphur-yellow, having a pleasant smell. Perennial: flowers in April and May: grows in woods, hedges, thickets, grassy banks, &c.; common. *Engl. Bot.* vol. i. pl. 4. *Engl. Fl.* vol. i. p. 271.

P. elátior. Oxlip Primrose. Leaves wrinkled, toothed; stalk many-flowered; limb of the corolla flat.—Leaves contracted about the middle: flowers in an umbel: corolla smaller than in the last, pale yellow, the centre deeper yellow. This is supposed to be a hybrid between the Primrose and Cowslip. Perennial: flowers in April and May: grows in woods, hedges, &c. *Engl. Bot.* vol. viii. pl. 513. *Engl. Bot.* vol. i. p. 271.

P. véris. Cowslip. Paigle. Leaves toothed, wrinkled, contracted toward the middle; stalk many-flowered; limb of the corolla concave. ——Leaves more downy and softer than in the foregoing: flowers in umbels: corolla with the limb concave, shorter, and of a deeper yellow: the flowers are used for making cowslip wine. Perennial: flowers in April and May: grows in meadows and pastures. *Engl. Bot.* vol. i. pl. 5. *Engl. Fl.* vol. i. p. 272.

P. farinósa. Bird's-eye Primrose. Leaves toothed, even, powdery beneath; limb of the corolla flat; mouth with a notched border; stigma undivided.——Leaves mealy underneath: corolla rose-coloured, the mouth surrounded with a yellow, notched, glandular border: umbel few-flowered. Perennial: flowers in June and July: grows in wet pastures and by rivulets in the north of England and in Scotland; rare. *Engl. Bot.* vol. i. pl. 6. *Engl. Fl.* vol. i. p. 273.

P. scótica. Scottish Primrose. Leaves toothed, even, powdery on both sides; limb of the corolla flat; mouth with a notched border; stigma five-cleft.——Smaller than the last, the leaves mealy on both sides. Perennial: flowers in June and July: grows on the east coast of the northern division of Scotland, and in the Orkney Islands. *Fl. Lond. new. ser.* pl. 133. *Engl. Fl.* vol. i. p. 273.

12. CY'CLAMEN.

Calyx inferior, divided half-way into five egg-shaped segments, permanent. Corolla of one petal, wheel-shaped, with a nearly globular tube, reflexed limb, and open naked mouth, prominent at the circumference. Filaments very short. Anthers straight, acute. Germen

roundish. Style thread-shaped, longer than the stamens, stigma acute. Capsule globose, one-celled, the inside pulpy. Seeds numerous, egg-shaped, angular.

C. hederifólium. Ivy-leaved Cyclamen. Leaves heart-shaped, angular, finely toothed.——Root globular, brown: leaves variegated with dark and pale green: flowers pendulous on naked stalks: corolla white or flesh-coloured: very acrid, especially the root. Perennial: flowers in April: grows in thickets and woods, hardly indigenous; rare. *Engl. Bot.* vol. viii. pl. 810: *C. europæum. Engl. Fl.* vol. i. p. 274.

13. MENYAN'THES.

Calyx inferior, of one leaf, deeply divided into five segments, permanent. Corolla of one petal, with a short tube, and a limb divided into five recurved segments, covered above with long thread-like fibres. Filaments awl-shaped, short. Anther cleft at the base. Germen conical. Style cylindrical. Stigma notched. Capsule egg-shaped, one-celled, two-valved. Seeds numerous, attached to the margins of each valve.

M. trifoliáta. Marsh Trefoil. Bog-bean. Leaves ternate, disk of the corolla shaggy.——Root large, black, creeping: stems round: leaves ternate on round footstalks: clusters stalked, opposite the leaves: corolla flesh-coloured, the filaments white. This beautiful plant is possessed of powerful medicinal properties: an infusion of the leaves is extremely bitter, and is prescribed in rheumatisms and dropsies: it may be used as a substitute for hops in making beer, and is employed as a purgative for calves. Perennial: flowers in June and July: grows in marshy places, ditches, pools, and shallow lakes; abundant. *Engl. Bot.* vol. vii. pl. 495. *Engl. Fl.* vol. i. p. 275. *Fl. Scot.* p. 71.

M. nymphæoides. Fringed Bog-bean, or *Water Lily.* Leaves heart-shaped, waved at the edges, floating; corolla fringed.——Stems several feet long: flowers axillar: corolla yellow, with a darker disk. Perennial: flowers in July and August: grows in ponds and rivers; rare. In several parts of the Thames; in the Isis. *Engl. Bot.* vol. iv. pl. 217. *Engl. Fl.* vol. i. p. 276.

14. HOTTO'NIA.

Calyx inferior, of one leaf, deeply divided into five linear segments. Corolla of one petal, salver-shaped, with a cylindrical, open tube, the limb divided into five oblong, notched, equal segments. Filaments awl-shaped, short. Anthers oblong. Germen globular, pointed. Style short, cylindrical. Stigma globular. Capsule globular, pointed, one-celled, five-valved. Seeds numerous, roundish.

H. palústris. Water Featherfoil. Water Violet. Stalks solitary, many-flowered; partial stalks whorled.——Foliage under water, the flowers alone rising above the surface: leaves deeply pinnatifid, with linear segments: flowers in numerous whorls, lilac-coloured, of the shape of those of the primrose. Perennial: flowers in June: grows in ditches and ponds, in England. *Engl. Bot.* vol. vi. pl. 364. *Engl. Fl.* vol. i. p. 277.

15. LYSIMA'CHIA.

Calyx inferior, of one leaf, deeply divided into five acute segments. Corolla of one petal, wheel-shaped, without a tube, the limb divided into five egg-shaped segments. Filaments awl-shaped. Anthers oblong, notched at both ends. Germen roundish. Style thread-shaped, as long as the stamens. Stigma obtuse. Capsule globular, pointed, one-celled, ten-valved. Seeds numerous, angular.

* *Stalks many-flowered.*

L. vulgàris. Great Yellow Loose-strife. Clusters panicled, terminal, leaves between egg-shaped and lance-shaped, acute.——Root creeping: stems four feet high, erect, angled: flowers yellow. Perennial: flowers in July: grows in wet shady places. *Engl. Bot.* vol. xi. pl. 761. *Engl. Fl.* vol. i. p. 278.

L. thyrsiflòra. Tufted Loose-strife. Clusters lateral, stalked.——Root creeping: stems two feet high, erect, simple: leaves numerous, opposite, sessile, lance-shaped: flowers small, yellow. Perennial: flowers in July: grows in watery places; rare. *Engl. Bot.* vol. iii. pl. 176. *Engl. Fl.* vol. i. p. 279.

** *Stalks single-flowered.*

L. némorum. Wood Loose-strife. Yellow Pimpernel. Leaves egg-shaped, acute; stem procumbent; stamens smooth.——Stems from six to twelve inches long: flowers golden yellow. Perennial: flowers from May to September: grows in woods and thickets; common, *Engl. Bot.* vol. viii. pl. 528. *Engl. Fl.* vol. i. p. 279.

L. Nummulària. Creeping Loose-strife. Money-wort. Leaves approaching to heart-shaped; flowers solitary; stem prostrate, creeping; stamens glandular.——Stems compressed with four prominent angles, from one to two feet long: flowers pale lemon-coloured. Perennial: flowers in June and July: grows in wet meadows, and on the borders of rivulets. *Engl. Bot.* vol. viii. pl. 528. *Engl. Fl.* vol. i. p. 280.

16. ANAGAL'LIS.

Calyx inferior, of one leaf, deeply divided into five acute, spreading segments, permanent. Corolla of one petal, wheel-shaped, without a tube, the limb nearly flat, divided into five egg-shaped segments. Filaments slender, erect, shorter than the corolla, covered with glandular hairs. Anthers heart-shaped. Germen globular. Style thread-shaped. Stigma knobbed. Capsule round, one-celled, splitting across into two valves. Seeds numerous, angular.

A. arven'sis. Common Scarlet Pimpernel. Leaves egg-shaped, dotted beneath; stem procumbent; corolla minutely notched.——Stem branched, square: leaves sessile: corolla scarlet, with a violet-coloured mouth. Annual: flowers through the summer and autumn: grows in fields and gardens; common. *Engl. Bot.* vol. viii. pl. 529. *Engl. Fl.* vol. i. p. 281.

A. cærul'ea. Blue Pimpernel. Leaves egg-shaped, dotted beneath:

stem erect; corolla strongly notched.——Corolla bright blue. Annual: flowers in the summer months: grows in fields and gardens; rare. *Engl. Bot.* vol. xxvi. pl. 1823. *Engl. Fl.* vol. i. p. 281.

A. tenel'la. Bog Pimpernel. Leaves roundish, somewhat pointed, stalked; stem creeping.——Root and stems creeping: leaves finely dotted beneath: flowers erect, rose-coloured. Perennial: flowers in July and August: grows on wet heaths and meadows; not uncommon. *Engl. Bot.* vol. viii. pl. 530. *Engl. Fl.* vol. i. p. 282.

17. AZA'LEA.

Calyx inferior, of one leaf, deeply divided into five, acute, erect segments, permanent. Corolla of one petal, bell-shaped, divided halfway into five nearly equal segments with inflected margins. Filaments thread-shaped. Anthers roundish. Germen globular. Style cylindrical, erect, permanent. Stigma knobbed. Capsule roundish, with five deep furrows, five-celled, five-valved. Seeds numerous, roundish.

A. procúmbens. Trailing Azalea. Branches spreading and procumbent; leaves opposite, revolute, smooth.——A small shrub growing in tufts: flowers terminal, rose-coloured. Flowers in July: grows on dry heathy ground on many of the Highland mountains.

18. CONVOL'VULUS.

Calyx inferior, of one leaf, small, divided into five egg-shaped, permament segments. Corolla of one petal, large, bell-shaped, regular, with five plaits and five shallow lobes. Nectary, a gland under the germen. Filaments awl-shaped, half as long as the corolla. Anthers arrow-shaped, erect, terminal. Germen roundish. Style thread-shaped, as long as the stamens. Stigmas two, spreading. Capsule roundish. Seeds large, roundish.

C. sépium. Great Bindweed. Leaves arrow-shaped; flower-stalks square, bearing a single flower; bracteas heart-shaped, close to the flower.——Roots long, creeping: stems twining, several feet long: flowers large, white or tinged with rose-colour. Perennial: flowers in July and August: grows in hedges and thickets. *Engl. Bot.* vol. v. pl. 312. *Engl. Fl.* vol. i. p. 285.

C. arvénsis. Small Bindweed. Leaves arrow-shaped; flower-stalks bearing a single flower; bracteas minute, remote from the flower.——Root creeping, long: stems twining or prostrate, several feet long: flowers rose-coloured, sometimes white. Perennial: flowers in June and July: grows in hedges, on dry banks, in pastures, &c. *Engl. Bot.* vol. v. pl. 312. *Engl. Fl.* vol. i. p. 285.

C. *Soldanella. Sea Bindweed.* Leaves kidney-shaped; flower-stalks bearing a single flower, their angles membranous; stems procumbent.——Root creeping: stems about two feet long: leaves rather succulent: flowers large, purplish pink-coloured, with pale yellow plaits. Perennial: flowers in June and July: grows in sand on the sea-shore. *Engl. Bot.* vol. v. pl. 314. *Engl. Fl.* vol. i. p. 286.

19. POLEMO'NIUM.

Calyx inferior, of one leaf, cup-shaped, divided into five broad segments, permanent. Corolla of one petal, wheel-shaped, with a very short tube, closed at the top by five convex, downy valves; the limb flat, with five obtuse, equal segments. Filaments thread-shaped, inclining, shorter than the corolla. Anthers roundish, erect. Germen egg-shaped, acute, superior. Style cylindrical, as long as the stamens. Stigma three-cleft, revolute. Capsule egg-shaped, with three blunt angles, three-celled, three-valved. Seeds numerous, triangular.

P. cæ'ruleum. Greek Valerian. Jacob's Ladder. Leaves pinnate; flowers erect; root fibrous.——Stem from one to two feet high, angular, hollow, leafy, panicled at the top: leaves alternate: flowers numerous, blue. Perennial: flowers in June: grows in bushy places in the north of England and south of Scotland; rare. *Engl. Bot.* vol. i. pl. 14. *Engl. Fl.* vol. i. p. 287.

20. CAMPA'NULA.

Calyx superior, of one leaf, deeply divided into five acute segments. permanent. Corolla of one petal, bell-shaped, impervious at the base, furnished at the lower part with five acute valves, covering the top of the germens, the limb divided into five broad, regular segments. Filaments hair-shaped, very short, from the point of the valves. Anthers linear, compressed. Germen inferior, angular. Style thread-shaped, longer than the stamens. Stigma oblong, with three revolute divisions. Capsule roundish, angular, three-celled. Seeds numerous, small.

C. rotundifo'lia. Round-leaved or *Common Bell-flower.* Root-leaves kidney-shaped, serrate; stem-leaves linear, entire.——The root-leaves wither very soon, so that when the plant is in flower the stem-leaves alone are to be seen: stem about a foot high: corolla blue. Perennial: flowers in July and August: grows in dry pastures, by road-sides, hedges, &c.; common. *Engl. Bot.* vol. viii. pl. 866. *Engl. Fl.* vol. i. p. 288.

C. pa'tula. Spreading Bell-flower. Root-leaves egg-shaped; stem-leaves narrow, lance-shaped, all even, crenate and roughish; panicle spreading; calyx minutely toothed.——Stem two feet high, angular, rough, panicled: flowers fine blue, larger than those of the preceding species. Perennial: flowers in July and August: grows in pastures, on the borders of fields, and in hedges; rare. Borders of Budden Wood, near Loughborough; in many parts of Worcestershire and Staffordshire; in Norfolk, Surrey, and Kent. *Engl. Bot.* vol. i. pl. 42. *Engl. Fl.* vol. i. p. 290.

C. Rapun'culus. Rampion Bell-flower. Leaves waved, crenate, roughish; root-leaves elliptical; stem angular, hairy below; panicle compact; calyx entire.——Root spindle-shaped, white: stem three feet high, leafy: corolla light blue. The roots are eaten raw, or variously dressed. Biennial: flowers in July and August: grows

about the borders of fields, on hedge-banks, &c., in Norfolk, Kent, and Surrey; not common. *Engl. Bot.* vol. iv. pl. 283. *Engl. Fl.* vol. i. p. 290.

C. persicifolia. Peach-leaved Bell-flower. Leaves smooth, slightly serrate; root-leaves inversely egg-shaped, stem-leaves narrow, lance-shaped, sessile; stem round, smooth, few-flowered.——Root creeping: stems about two feet high: flowers very large, fine blue. Perennial: flowers in July. Found near Cullen, by Mr. G. Don. *Engl. Fl.* vol. i. p. 291. *Fl. Scot.* p. 74.

C. latifolia. Giant Bell-flower. Leaves roughish, between egg-shaped and lance-shaped; stem simple, rounded; flowers solitary, stalked, erect; fruit drooping.——Stem three or four feet high: flowers large, deep blue. Perennial: flowers in July and August: grows in moist woods and thickets. *Engl. Bot.* vol. v. pl. 302. *Engl. Fl.* vol. i. p. 291.

C. rapunculoides. Creeping Bell-flower. Leaves roughish; root-leaves heart-shaped, crenate, stalked; stem-leaves lance-shaped, sessile; flowers unilateral, drooping, forming a terminal cluster.——Stems about two feet high: flowers purplish blue. Perennial: flowers in July and August: grows in woods and fields; rare. Oxfordshire; near Kirkaldy, Fifeshire, found by Mr. Chalmers. *Engl. Bot.* vol. xx. pl. 1369. *Engl. Fl.* vol. i. p. 292.

C. Trachelium. Nettle-leaved Bell-flower. Stem angular; leaves stalked, heart-shaped, acutely serrate, bristly as well as the calyx; flower-stalks axillar.——Stem two or three feet high: upper leaves lance-shaped: flowers large, deep blue. Perennial: flowers in July: grows in woods, thickets, and hedges. *Engl. Bot.* vol. i. pl. 12. *Engl. Fl.* vol. i. p. 293.

C. glomerata. Clustered Bell-flower. Stem angular, simple; leaves egg-shaped, crenate, rough with hairs, those of the stem embracing; flowers sessile, mostly in a terminal head.——Stem about a foot high, erect: flowers deep bluish-purple. Perennial: flowers in July and August: grows in dry pastures. *Engl. Bot.* vol. ii. pl. 90. *Engl. Fl.* vol. i. p. 293.

C. hybrida. Corn Bell-flower. Stem straight, rough; leaves oblong, crenate; corolla widely spreading, shorter than the calyx.——Stem about six inches high: flowers deep blue. Annual: flowers in August: grows in dry corn fields. *Engl. Bot.* vol. vi. pl. 375. *Engl. Fl.* vol. i. p. 294.

C. hederacea. Ivy-leaved Bell-flower. Stem feeble, much branched, procumbent; leaves stalked, smooth, heart-shaped, with angular lobes. Stems in loose tufts: flowers pale purplish-blue. Perennial: flowers in July and August: grows in moist shady places. *Engl. Bot.* vol. ii. pl. 73. *Engl. Fl.* vol. i. p. 295.

21. PHYTEU'MA.

Calyx superior, of one leaf, deeply divided into five acute, permanent segments. Corolla of one petal, wheel-shaped, deeply divided into five linear, acute, recurved segments. Filaments thread-shaped, dilated at the base, much shorter than the corolla. Anthers oblong.

Germen angular. Style cylindrical, curved, longer than the stamens. Stigma divided into two or three spreading segments. Capsule roundish, two or three-celled, with strong ribs. Seeds numerous, small, inversely egg-shaped.

Ph. orbiculáre. Round-headed Rampion. Flowers in a roundish head; root-leaves heart-shaped, stem-leaves elliptical, the upper ones lance-shaped.——Stems about a foot high, angular, smooth: leaves crenate, the lower ones stalked, the upper sessile: flowers deep blue. Perennial: flowers in August: grows in pastures, and by road-sides, in the south of England; rare. *Engl. Bot.* vol. ii. pl. 142. *Engl. Fl.* vol. i. p. 296.

22. JASI'ONE.

Calyx superior, of one leaf, deeply divided into five acute, permanent segments. Corolla wheel-shaped, deeply divided into five, lance-shaped, equal segments. Filaments awl-shaped, short. Anthers oblong, united at the base. Germen roundish. Style cylindrical, longer than the stamens. Stigma cleft. Capsule roundish, with five angles, imperfectly two-celled, opening by a round pore at the top. Seeds numerous, oblong, minute, attached to a globular stalked receptacle.

J. montána. Common Sheep's-bit.——Root tapering: stems about eight inches high, generally branched: leaves sessile, oblong, rough: flowers purplish blue, in round terminal tufts, each tuft surrounded by egg-shaped bracteas. Annual: flowers in June and July: grows in dry pastures. *Engl. Bot.* vol. xiii. pl. 882. *Engl. Fl.* vol. i. p. 297.

23. LOBE'LIA.

Calyx superior, of one leaf, deeply divided into five small, nearly regular, permanent segments. Corolla of one petal, irregular: tube cylindrical, split along the upper side; limb deeply divided into five lance-shaped segments, the two upper small, forming the upper lip, the others more spreading and forming the lower lip. Filaments awl-shaped, as long as the tube, united at the top. Anthers united into a cylinder. Germen pointed. Style cylindrical, as long as the stamens. Stigma knobbed, hairy. Capsule elliptical, angular, with two or three cells, and as many valves, open at the top: partitions contrary to the valves. Seeds numerous, minute, covering a conical receptacle.

L. Dortmánna. Water Lobelia. Leaves linear, entire, with two longitudinal cells; stem, nearly leafless.——Leaves numerous, mostly from the root: stem solitary, erect, hollow, slightly leafy, terminating in a loose cluster of pale blue, drooping flowers. Perennial: flowers in July: grows near the margins of lakes, the flowers rising above the water; very common in the Highlands and Hebrides. *Engl. Bot.* vol. ii. pl. 140. *Engl. Fl.* vol. i. p. 298.

L. úrens. Acrid Lobelia. Stem nearly erect; lower leaves roundish, crenate; upper lance-shaped, serrate; clusters terminal.——Stem about a foot high, branched, leafy, roughish: flowers pale purplish-

blue, downy. Perennial: flowers in August and September: grows on bushy heaths in Devonshire. *Engl. Bot.* vol. xiv. pl. 923. *Engl. Fl.* vol. i. p. 299.

24. IMPATIENS.

Calyx inferior, small, of two roundish, concave, unequal, deciduous leaves. Corolla of five unequal petals; the upper roundish, flat, erect, three-cleft, forming the upper lip; the two lower very large, reflected, obtuse, irregular, forming the lower lip; the middle two opposite, at the base of the upper lip, sometimes wanting. Nectary of one leaf, tubular, oblique at the mouth, the upper edge of which is attached to the receptacle, tapering at the base into a curved spur. Filaments very short, incurved. Anthers united at the base. Germen egg-shaped, pointed. Style none. Stigma undivided, short. Capsules egg-shaped five-celled, five-valved. Seeds oval, attached to a central column.

I. Noli-me-tangere. Touch-me-not. Yellow Balsam. Flowers on branched axillar stalks; leaves egg-shaped, serrate, stalked; joints of the stem swelling.——Stem a foot high, rounded, succulent, brittle: flowers large, yellow, internally spotted with red. Annual: flowers in July and August: grows in watery places in the north of England. *Engl. Bot.* vol. xiv. pl. 937. *Engl. Fl.* vol. i. p. 300.

25. VIOLA.

Calyx inferior, of five oblong, acute, equal, erect, permanent leaves, produced downwards beyond their insertion; two of them under the uppermost petal, one under each of the lateral petals, and one under the two lower. Corolla irregular, of five unequal petals; the uppermost broadest, slightly cleft, directed downwards, terminating at the base in a curved spur, projecting between the leaves of the calyx; two lateral petals opposite, equal, obtuse, straight; two lower, equal, larger, and directed upwards. Filaments very small. Anthers broad, close together, obtuse, each with a membranous point. Germen superior, roundish. Style thread-shaped, extending beyond the anthers. Stigma oblique. Capsule egg-shaped, one-celled, three-valved. Seeds several in each cell, egg-shaped, attached to a linear receptacle in the middle of each valve.

V. hirta. Hairy Violet. Stem none; leaves heart-shaped, rough with hairs, as well as their stalks; leaves of the calyx obtuse; lateral petals with a hairy central line.——Stipules lance-shaped: flowers solitary, light greyish-blue, streaked with black. Perennial: flowers in April: grows in woods and pastures. *Engl. Bot.* vol. xiii. pl. 894. *Engl. Fl.* vol. i. p. 302.

V. odorata. Sweet Violet. Stem none; root throwing out creeping runners; leaves heart-shaped, nearly smooth, as well as their stalks; leaves of the calyx obtuse; lateral petals with a hairy central line.——Stipules lance-shaped, toothed: flowers deep purplish-blue, scented. Perennial: flowers in March and April: grows in woods and pastures. *Engl. Bot.* vol. ix. pl. 619. *Engl. Fl.* vol. i. p. 302.

V. palústris. Marsh Violet. Stem none; leaves kidney-shaped, smooth; root creeping; spur very short; lateral petals with a central hairy line.——Stipules egg-shaped, nearly entire: flowers drooping, very pale blue, with purple streaks. Perennial: flowers in April: grows in bogs and wet mossy ground. *Engl. Bot.* vol. vii. pl. 444. *Engl. Fl.* vol. i. p. 303.

V. canina. Dog's Violet. Stem angular; leaves heart-shaped; leaves of the calyx acute; stipules serrate; bracteas linear, entire. ——Leaves nearly smooth, crenate: flowers drooping, blue with purple lines, and a greenish white spur. Perennial: flowers through the summer: grows in woods, thickets, hedges, and pastures; very common. *Engl. Bot.* vol. ix. pl. 620. *Engl. Fl.* vol. i. p. 304.

V. láctea. Cream-coloured Violet. Stem round; leaves between egg-shaped and lance-shaped; stipules toothed; bracteas lance-shaped; leaves of the calyx acute.——Flowers bluish-white, with purplish streaks. Perennial: flowers in May: grows in hilly pastures. *Engl. Bot.* vol. vii. pl. 445. *Engl. Fl.* vol. i. p. 304.

V. flavicórnis. Yellow-spurred Violet. Stem woody, somewhat angular, much branched; leaves heart-shaped, leathery, smooth; stipules and bracteas toothed; leaves of the calyx lance-shaped.——Flowers small, blue, with a short yellowish spur. Perennial: flowers in May and June: grows in pastures and on dry banks. *Engl. Fl.* vol. i. p. 305.

V. tricolor. Pansy Violet. Heart's-ease. Stem angular, branched, spreading; leaves oblong, deeply crenate; stipules lyre-shaped, pinnatifid.——Stem about six inches high: flowers varying greatly in size and colour. Annual: flowers through the summer and autumn: grows in loose soil. *Engl. Bot.* vol. xviii. pl. 1287. *Engl. Fl.* vol. i. p. 306.

V. lútea. Yellow Pansy. Stem triangular, unbranched, erect; leaves broadly oblong, crenate; stipules lobed, palmate.——Stem three or four inches high: flowers very large, generally yellow, sometimes purple. Perennial: flowers from May to September: grows in hilly pastures. *Engl. Bot.* vol. xi. pl. 721. *Engl. Fl.* vol. i. p. 307.

26. VERBA'SCUM.

Calyx inferior, of one leaf, deeply divided into five erect, acute, nearly equal, permanent segments. Corolla of one petal, wheel-shaped, unequal, the tube very short; the limb spreading, deeply divided into five rounded segments. Filaments awl-shaped, unequal, declining, woolly, shorter than the corolla. Anthers kidney-shaped, compressed. Germen roundish. Style thread-shaped, slightly swelling upwards, declining, rather longer than the stamens. Stigma obtuse. Capsule egg-shaped, two-celled, two-valved; partition double, frequently incomplete. Seeds numerous, minute, angular, covering the egg-shaped or globular central receptacle.

V. Thápsus. Great Mullein. Leaves decurrent, woolly, on both sides; stem simple; cluster dense.——Root spindle-shaped: stem erect, three or four feet high, woolly: flowers nearly sessile, large, golden yellow. Biennial: flowers in July and August: grows in

waste ground, in sandy or gravelly soil. *Engl. Bot.* vol. viii. pl. 549. *Engl. Fl.* vol. i. p. 309.

V. Lychnítis. White Mullein. Leaves oblong, inclining to wedge-shaped, nearly smooth on their upper side; stem angular, panicled.——Stem erect, about three feet high, woolly: flowers stalked, rather small, cream-coloured. Biennial: flowers in July and August: grows in waste places. *Engl. Bot.* vol. i. pl. 58. *Engl. Fl.* vol. i. p. 310.

V. pulverulèntum. Yellow Hoary Mullein. Leaves egg-shaped, obscurely serrate, covered on both sides with mealy wool; stem round, panicled.——Stem from three to five feet high, leafy, woolly: flowers bright yellow, stalked. Biennial: flowers in July: grows in waste places. *Engl. Bot.* vol. vii. pl. 487. *Engl. Fl.* vol. i. p. 311.

V. nigrum. Black Mullein. Leaves heart-shaped, stalked, waved, crenate, slightly downy; stem angular; cluster spiked.——Stem two or three feet high, leafy: flowers bright yellow: stamens covered with purple hairs. Perennial: flowers in July and August: grows in waste places. *Engl. Bot.* vol. i. pl. 59. *Engl. Fl.* vol. i. p. 312.

V. virgátum. Large-flowered Primrose-leaved Mullein. Leaves broadly lance-shaped, toothed, sessile; root-leaves downy, somewhat lyre-shaped; stem branched; flowers aggregate, partly stalked.——Stem five or six feet high, winged: flowers large, bright yellow. Biennial: flowers in August: grows in fields and waste places; rare. *Engl. Bot.* vol. viii. pl. 550. *Engl. Fl.* vol. i. p. 313.

V. Blattária. Moth Mullein. Leaves embracing the stem, oblong, smooth; stem branched above, each branch terminating in a simple cluster; flower-stalks longer than the bracteas.——Stem three or four feet high, erect, leafy, smooth: flowers yellow, stained with brown at the back. Annual: flowers in July: grows in gravelly soil, in England; rare. *Engl. Bot.* vol. vi. pl. 393. *Engl. Fl.* vol. i. p. 313.

27. HYOSCY'AMUS.

Calyx inferior, of one leaf, tubular, swelling below, the limb divided into five segments. Corolla of one petal, funnel-shaped, irregular, tube cylindrical, short, limb divided half-way into five obtuse, rounded segments, one of them broader. Filaments awl-shaped, somewhat unequal in length. Anthers heart-shaped. Germen roundish. Style thread-shaped, reclined as long as the stamens. Stigma knobbed. Capsule egg-shaped, with a longitudinal furrow at each side, two-celled, opening transversely. Seeds numerous, inversely egg-shaped, curved, covering the oblong, convex receptacles, which are attached to the partition.

H. ni'ger. Common Henbane. Leaves sinuated, embracing the stem; flowers sessile.——Stem branched, rounded: the whole plant woolly and clammy, with a fetid odour: flowers pale yellowish, with dark purple veins. Poisonous, producing convulsions, delirium and death: used medicinally as a sedative. Annual: flowers in July: grows in waste ground, in loose dry soil. *Engl. Bot.* vol. ix. pl. 591. *Engl. Fl.* vol. i. p. 315.

28. ATROPA.

Calyx inferior, of one leaf, permanent, deeply divided into five acute, somewhat unequal segments. Corolla of one petal, bell-shaped; the tube very short; the limb tumid, egg-shaped, longer than the calyx, with five shallow, nearly equal, marginal segments. Filaments awl-shaped, spreading and curved above, nearly as long as the corolla. Germen egg-shaped, with a gland beneath. Style thread-shaped, inclining upwards, as long as the corolla. Stigma knobbed. Berry globular, with two lateral furrows, two-celled. Seeds numerous, kidney-shaped, attached in each cell to a fleshy receptacle, fixed to the partition.

A. Belladónna. Deadly Night-shade. Stem herbaceous; leaves egg-shaped, undivided.——Stem three feet high, round, branched, slightly downy: flowers solitary, stalked, dull purple. The whole plant is fetid and poisonous. Children are apt to eat the shining black berries, which have a sweetish taste, but in the smallest quantity produce fatal effects. Perennial: flowers in June: grows in hedges and waste ground. *Engl. Bot.* vol. ix. pl. 592. *Engl. Fl.* vol. i. p. 317.

29. SOLA'NUM.

Calyx inferior, of one leaf, divided into five acute, permanent segments. Corolla of one petal, wheel-shaped; tube very short; limb much longer, reflected, plaited, divided into five acute segments. Filaments awl-shaped, short. Anthers much longer than the filaments, oblong, angular, close together, with two terminal pores. Germen roundish. Style thread-shaped, longer than the stamens, deciduous. Stigma obtuse. Berry roundish, glossy, with a terminal scar, two-celled. Seeds numerous, roundish, compressed, attached to a fleshy receptacle, connected with the partition.

S. Dulcamára. Bitter-sweet. Woody Night-shade. Stem shrubby, undulated, thornless; upper leaves halbert-shaped; clusters cymose. ——Stem branched, twining: lower leaves heart-shaped or egg-shaped: corolla purple, with two round green spots at the base of each segment: berries oval, scarlet. The root and leaves have been applied to various medicinal uses. The berries are poisonous. A shrub: flowers in June and July: grows in thickets and hedges. *Engl. Bot.* vol. viii. pl. 565. *Engl. Fl.* vol. i. p. 318.

S. ni'grum. Common Night-shade. Stem herbaceous, thornless; leaves egg-shaped, toothed, angular; umbels lateral, drooping.——Stem branched, angular: flowers white: berries globular, black. The whole plant is fetid and narcotic, and has been employed medicinally. The potatoe belongs to this family, the species of which are generally extremely poisonous. Annual: flowers from June to September: grows in waste places near houses. *Engl. Bot.* vol. viii. pl. 566. *Engl. Fl.* vol. i. p. 319.

29. ERYTHRÆ'A.

Calyx inferior, permanent, of one leaf, deeply divided into five erect, awl-shaped segments. Corolla of one petal, salver-shaped; tube

nearly cylindrical, slender, longer than the calyx; limb deeply divided into five egg-shaped or lance-shaped spreading segments. Filaments thread-shaped, equal, much shorter than the corolla. Anthers oblong, twisting spirally. Germen oblong or nearly linear, compressed. Style cylindrical, straight. Stigmas two, roundish, finally spreading. Capsule oblong, acute at each end, compressed, imperfectly two-celled, two-valved. Seeds numerous, roundish, arranged in four rows.

E. Centaúrium. Common Centaury. Stem nearly simple; panicle forked, corymbose; leaves broadly lance-shaped; calyx half as long as the tube, its segments partly united by a membrane.——Stem about a foot high, leafy: flowers rose-coloured. Annual: flowers in July and August: grows in dry pastures. Bitter and stomachic, formerly much used, but now neglected. *Engl. Bot.* vol. vi. pl. 417. *Engl. Fl.* vol. i. p. 321.

E. littorális. Dwarf Tufted Centaury. Stem generally simple, straight; leaves between linear and inversely egg-shaped, obscurely three-ribbed; flowers sessile, densely corymbose; calyx as long as the tube, its segments united at the base.——Two or three inches high, stout: flowers rose-coloured. Annual: flowers in June and July: grows in sandy pastures near the sea. *Engl. Bot.* vol. xxxiii. pl. 2305. *Engl. Fl.* vol. i. p. 320.

E. pulchélla. Dwarf Branched Centaury. Stem much branched or simple; leaves egg-shaped; flowers stalked, solitary; calyx more than half the length of the tube; segment of the corolla lance-shaped.——Stem erect, from one to three inches high: flowers from the forks of the stem, as well as terminal, slender, with a pink corolla. Annual: flowers in August and September: grows on sandy ground, near the sea. *Engl. Bot.* vol. vii. pl. 458. *Engl. Fl.* vol. i. p. 323.

31. SA'MOLUS.

Calyx inferior, of one leaf; tube hemispherical; margin deeply divided into five equal, permanent segments. Corolla of one petal, funnel-shaped; tube wide, as long as the calyx; limb with five deep, obtuse segments, and five small intermediate scales at the base. Filaments awl-shaped, short, arising from the middle of the tube. Anthers roundish, two-lobed, covered by the scales of the corolla. Germen nearly globular, covered by the tube of the corolla. Style erect, short, stigma knobbed. Capsule globular, one-celled, its lower half closely invested by the calyx. Seeds numerous, small, angular, covering the globular, central receptacles.

S. Valerandi. Water Pimpernel. Common Brook-weed. Leaves inversely egg-shaped, obtuse; clusters many-flowered; partial flower-stalks, each with a small bractea.——Smooth, pale green: stem erect, round, about a foot high: flowers small, white. Perennial: flowers in July: grows in watery places, on gravelly soil. *Engl. Bot.* vol. x. pl. 703. *Eng. Fl.* vol. i. p. 324.

32. LONICE'RA.

Calyx superior, small, of one leaf, with five deep segments. Corolla of one petal, tubular: tube oblong, bulging at one side; limb deeply

divided into five revolute segments, one of which is more deeply separated. Filaments awl-shaped, arising from the upper part of the tube. Anthers oblong. Germen roundish. Style thread-shaped, as long as the corolla. Stigma bluntly knobbed. Berry roundish, with one or more cells, its lower half closely invested by the calyx. Seeds several, roundish, compressed.

L. Caprifólium. Pale Perfoliate Honeysuckle. Flowers gaping, whorled, terminal; upper leaves confluent and perfoliate.——A twining shrub, with smooth stem and leaves: flowers yellowish with a reddish tube, six together: berries elliptical, brownish-orange. Flowers in May and June: grows in woods and thickets; rare. *Engl. Bot.* vol. xii. pl. 799. *Engl. Fl.* vol. i. p. 326.

L. Periclýmenum. Common Honeysuckle, or *Woodbine.* Flowers gaping, in imbricated, terminal, egg-shaped heads: leaves all distinct.——A twining shrub, well known for the delicious odour of its flowers, which are yellowish or white, with deep red streaks. Flowers in June and July: grows in thickets, hedges, and the clefts of rocks; common. *Engl. Bot.* vol. xii. pl. 800. *Engl. Fl.* vol. i. p. 327.

L. Xylósteum. Upright Honeysuckle. Flower-stalks with two flowers; berries distinct; leaves entire, downy.——A shrub, with an erect stem, four or five feet high: stalked, egg-shaped, acute leaves; small cream-coloured or reddish flowers, and scarlet berries. Flowers in July: grows in thickets and rocky places. *Engl. Bot.* vol. xiii. pl. 916. *Engl. Fl.* vol. i. p. 327.

33. RHA'MNUS.

Calyx inferior, of one leaf, funnel-shaped, coloured internally, limb with five, sometimes four acute, equal segments. Petals five or four, small, converging, sometimes wanting. Filaments awl-shaped, short, arising from the mouth of the calyx. Anthers roundish, two-lobed. Germen roundish. Style cylindrical, short. Stigma with two, three, or four lobes. Berry roundish, with two, three, or four cells. Seeds one in each cell, rounded on the outer side, flattened on the inner.

R. cathárticus. Buckthorn. Thorns terminal; flowers four-cleft, dioecious; leaves egg-shaped, acutely serrated; stem erect.——A shrub, with spreading branches, each ending in a sharp thorn: flowers yellowish-green; berries globular, bluish-black. The juice of the unripe berry dyes yellow. When ripe they are nauseous and violently purgative. Flowers in May: grows in thickets and hedges. *Engl. Bot.* vol. xxiii. pl. 1629. *Engl. Fl.* vol. i. p. 329.

R. Frángula. Alder Buckthorn. Thorns none; flowers all perfect; leaves entire.——A shrub, three or four feet high, with numerous black branches: flowers five-cleft, whitish: berries dark purple; the berries before they are ripe dye green. Flowers in May: grows in woods and thickets. *Engl. Bot.* vol. iv. pl. 250. *Engl. Fl.* vol. i. p. 329.

34. EUO'NYMUS.

Calyx inferior, of one leaf, deeply divided into five rounded, permanent segments. Petals five, egg-shaped, flat, spreading, longer than

the calyx. Filaments, awl-shaped, erect, shorter than the corolla, arising from the germen. Anthers two-lobed. Germen pointed. Style short, simple. Stigma obtuse. Capsule succulent, coloured, five-sided, five-cornered, five-celled, five-valved. Seeds egg-shaped, solitary, enveloped in a succulent coat.

E. europæ'us. Spindle-tree Prickwood. Flowers mostly four-cleft; branches smooth; leaves egg-shaped, pointed, serrated.——A shrub or small tree, with green, smooth bark: flowers small, greenish-white, the first only five-cleft: the fruit is violently emetic and purgative. Flowers in May: grows in hedges and thickets. *Engl. Bot.* vol. vi. pl. 362. *Engl. Fl.* vol. i. p. 330.

35. RI'BES.

Calyx superior, of one leaf, tumid, permanent, with five oblong, spreading, marginal segments. Petals five, small, obtuse, erect, from the edge of the calyx. Filaments awl-shaped, short, erect, arising from the calyx. Anthers compressed, two-lobed. Germen roundish. Style cleft. Stigma obtuse. Berry globular, dimpled, one-celled, with two lateral, longitudinal receptacles. Seeds numerous, roundish, somewhat compressed.

* *Without Prickles.*

R. rúbrum. Common Currant. Clusters smooth, pendulous; flowers nearly flat; petals inversely heart-shaped.——A bushy shrub, with a smooth deciduous cuticle: clusters simple: petals greenish-white: berries globular, red. Flowers in May: grows in woods and thickets. Isle of Isla, according to Lightfoot; banks of the Tees, according to Mr. E. Robson. *Engl. Bot.* vol. xviii. pl. 1289. *Engl. Fl.* vol. i. p. 331.

R. petræ'um. Rock Currant. Clusters somewhat hairy, when in flower erect, when in fruit pendulous; flower slightly concave; petals bluntish; bracteas shorter than the flower-stalks.——A shrub, with a bushy stem: flowers greenish-yellow: berries red: flowers in May and June: grows in woods, in Durham, and near Airly Castle. *Engl. Bot.* vol. x. pl. 705. *Engl. Fl.* vol. i. p. 332.

R. spicátum. Acid Mountain Currant. Spikes erect, with nearly sessile flowers; petals oblong; bracteas shorter than the flowers.——A shrub: flowers in May: found near Richmond, Yorkshire, by Mr. E. Robson. *Engl. Bot.* vol. xviii. pl. 1290. *Engl. Fl.* vol. i. p. 332.

R. alpínum. Tasteless Mountain Currant. Clusters erect, both in flower and in fruit; bracteas longer than the flowers; leaves shining on the back.——A shrub with erect branches, greenish, sometimes diœcious flowers, and scarlet, insipid berries: flowers in May: grows in thickets. *Engl. Bot.* vol. x. pl. 704. *Engl. Fl.* vol. i. p. 333.

R. nigrum. Black Currant. Clusters hairy, pendulous, with a separate single-flowered stalk at the base of each; flowers bell-shaped; leaves glandular.——A shrub with erect branches, pale green flowers, and globular, black berries. According to Dr. Withering, the petals sometimes change into stamens: the leaves are astringent, as are the berries in a slight degree, on which account they are used for sore

throats. Flowers in May: grows in wet hedges and on the banks of rivers. *Engl. Bot.* vol. xviii. pl. 1291. *Engl. Fl.* vol. i. p. 333.

** *Furnished with prickles.*

R. Grossulária. Common Gooseberry. Branches with prickles under the buds, otherwise smooth; flowers bell-shaped, on simple drooping stalks; segments of the calyx reflected, shorter than the tube.——A bushy shrub, with three-lobed leaves, greenish flowers, and green berries, rough with scattered hairs. The uses to which the berries of this and other species of the genus are applied, being so generally known, it is unnecessary to mention. Flowers in May: grows in hedges, thickets, waste ground, and on old buildings. *Engl. Bot.* vol. xxix. pl. 2057. *Engl. Fl.* vol. i. p. 334.

36. HE'DERA.

Calyx very small, of five teeth, surrounding the germen. Petals five, oblong, spreading. Filaments awl-shaped, erect, as long as the petals. Anthers cleft at the base. Germen turbinate, surrounded by the ring-like receptacle of the flower. Style very short. Stigma simple. Berry globular, one-celled. Seeds from three to five, large, oblong, convex on the outer, angular on the inner side.

H. Helix. Common Ivy. Leaves with five angular lobes, those of the flowering branches egg-shaped.——Stem branched, climbing and clinging by small lateral fibres: leaves tough, shining: flowers in umbels: berries black. A shrub: flowers in October: grows in woods and hedges, on old buildings, and on rocks. *Engl. Bot.* vol. xviii. pl. 1267. *Engl. Fl.* vol. i. p. 335.

37. ILLE'CEBRUM.

Calyx inferior, five-cornered, of five coloured, cartilaginous, permanent leaves. Corolla none. Filaments hair-like, shorter than the calyx, with five intermediate scales or bristles. Anthers simple. Germen egg-shaped, acute. Style short. Stigma obtuse. Capsule roundish, pointed at both ends, one-celled, five-valved. Seed solitary, oval, pointed at both ends, filling the capsule.

I. verticillátum. Whorled Knot-grass. Flowers in whorls, without bracteas; stems procumbent.——Leaves small, egg-shaped, acute: flowers small, white or reddish. Perennial: flowers in July: grows in marshy ground in Cornwall and Devonshire. *Engl. Bot.* vol. xiii. pl. 895. *Engl. Fl.* vol. i. p. 336.

38. GLAUX.

Calyx inferior, of one leaf, coloured, bell-shaped, deeply divided into five obtuse, spreading, recurved, permanent segments. Corolla none. Filaments awl-shaped, erect, as long as the calyx. Stigma knobbed. Capsule globular, pointed, one-celled, five-valved. Seeds five, roundish, attached to a large, globular, central receptacle, marked with pits.

G. marítima. Sea Milkwort. Black Saltwort.——Root of long fibres: stem from two to eight inches high, erect, branched, smooth: leaves

oblong, smooth, fleshy: flowers axillar, solitary, flesh-coloured. Perennial: flowers in June and July: grows on the sea-shore, in muddy places; common. *Engl. Bot.* vol. i. pl. 13. *Engl. Fl.* vol. i. p. 337.

39. THE'SIUM.

Calyx superior, of one leaf, internally coloured, divided half way into five spreading segments, permanent. Corolla none. Filaments awl-shaped, erect, short. Anthers roundish. Germen roundish, ribbed. Style thread-shaped, as long as the stamens. Stigma cleft. Drupe oblong, angular, dry, leathery, crowned by the closed calyx. Nut roundish.

T. linophy'llum. Bastard Toad-flax. Cluster branched; bracteas three together; leaves lance-shaped, inclining to linear; tube of the calyx very short.——Stem spreading, angular, from three to five inches high: calyx whitish, irregularly notched between the segments. Perennial: flowers in July: grows in elevated pastures, in England. *Engl. Bot.* vol. iv. pl. 247. *Engl. Fl.* vol. i. p. 338.

40. VIN'CA.

Calyx inferior, of one leaf, deeply divided into five erect, acute, permanent segments. Corolla of one petal, salver-shaped; tube longer than the calyx, cylindral below, dilated and marked with five grooves above, five-sided at the mouth; limb horizontal, deeply divided into five oblique, abrupt segments, attached to the top of the tube. Filaments short, first bent inwards and then outwards. Anthers membranous, obtuse, erect, incurved with the pollen at the margin. Germens two, roundish, accompanied by two roundish, lateral glands. Style one, common to both germens, cylindrical, shorter than the tube. Stigma knobbed, seated on a round, flat disk. Follicles two, cylindrical, acute, erect. Seeds several, oblong, cylindrical.

V. mínor. Lesser Periwinkle. Stems procumbent; leaves between lance-shaped and elliptical, smooth on the margin; flowers stalked; segments of the calyx lance-shaped.——Flowering branches erect: flowers solitary, bright blue. Perennial: flowers in May: grows on banks and in hedges; rare. *Engl. Bot.* vol. xiii. pl. 917. *Engl. Fl.* vol. i. p. 339.

V. májor. Greater Periwinkle. Stems ascending; leaves egg-shaped, fringed; flowers stalked; segments of the calyx linear, elongated.——Flowers pale blue, nearly twice the size of those of the former species. Perennial: flowers in May: grows in woods; rare. *Engl. Bot.* vol. viii. pl. 514. *Engl. Fl.* vol. i. p. 340.

DIGYNIA.

41. HERNIA'RIA.

Calyx inferior, of one leaf, internally coloured, deeply divided into five acute, spreading, permanent segments. Corolla none. Filaments awl-shaped, shorter than the calyx, with five intermediate imperfect ones. Anthers five, two-lobed. Germen egg-shaped. Styles very

short. Stigmas pointed. Capsule membranous, one-celled. Seed solitary, roundish, pointed, filling the capsule.

H. glábra. Smooth Rupture-wort. Herbaceous; leaves and calyx smooth.——Root tapering: stems prostrate, much branched: leaves inversely egg-shaped, on short stalks: flowers small, green, in dense clusters. Perennial: flowers in July and August: grows in sandy ground, in the south of England. *Engl. Bot.* vol. iii. pl. 206. *Engl. Fl.* vol. ii. p. 8.

H. hirsúta. Hairy Rupture-wort. Herbaceous; leaves and calyx hairy.——Resembles the last, excepting in being hairy, and is supposed by some to be but a variety of it. *Engl. Bot.* vol. xx. pl. 1379. *Engl. Fl.* vol. ii. p. 9.

42. CHENOPO'DIUM.

Calyx inferior, of one leaf, deeply divided into five egg-shaped, concave, permanent segments, membranous at the edges. Corolla none. Filaments awl-shaped, as long as the calyx. Anthers roundish, two-lobed. Germen round, depressed. Styles short. Stigmas obtuse. Seed solitary, round, flattened, enveloped by the permanent, five-cornered calyx.

* *Leaves angular.*

Ch. Bónus Henrícus. Mercury Goose-foot. Good Henry. Leaves triangular, arrow-shaped, entire; spikes terminal, and axillar, compound, leafless.——Root fleshy, branched: stems a foot high, furrowed, leafy. Perennial: flowers in May and June: grows in waste ground and by roads, near houses. *Engl. Bot.* vol. xv. pl. 1033. *Engl. Fl.* vol. ii. p. 10.

Ch. úrbicum. Upright Goose-foot. Leaves triangular, toothed; clusters very long, straight, approaching the stem, nearly leafless.——Root fibrous: stem erect, two feet high, angular, furrowed: leaves stalked: clusters axillar and terminal, erect, shorter than the leaves: seed five times as large as that of the following species. Annual: flowers in August and September: grows on dunghills and waste places. *Engl. Bot.* vol. x. pl. 717. *Engl. Fl.* vol. ii. p. 10.

Ch. rúbrum. Leaves triangular, somewhat diamond-shaped, deeply toothed and sinuate; racemes erect, compound, leafy; seed very minute.——Of a darker green than the last species: stems reddish: from one to two feet high. Annual: flowers in August and September; grows in dunghills and waste ground. *Engl. Bot.* vol. xxiv. pl. 1721. *Engl. Fl.* vol. ii. p. 11.

Ch. botryódes. Many-clustered Goose-foot. Leaves triangular, somewhat toothed, the upper ones bluntish; clusters erect, compound, leafy.——Stems spreading or prostrate: leaves fleshy, frequently red. Annual: flowers in August and September: grows in sandy places near Yarmouth and at Lowestoft. *Engl. Bot.* vol. xxxii. pl. 2247. *Engl. Fl.* vol. ii. p. 11.

Ch. murále. Nettle-leaved Goose-foot. Leaves egg-shaped, acute, toothed, shining; clusters panicled, cymose, leafless.——Stems erect, much branched: the whole plant of a darkish green and fetid. Annual:

flowers in August and September: grows in waste ground, about old walls. *Engl. Bot.* vol. xxiv. pl. 1722. *Engl. Fl.* vol. ii. p. 12.

Ch. hy'bridum. Maple-leaved Goose-foot. Leaves heart-shaped, pointed, with broad angular teeth; clusters panicled, cymose, divaricate, leafless.——Stem rather slender, branched: the whole plant bright green and fetid. Annual: flowers in August: grows in waste places. *Engl. Bot.* vol. xxvii. pl. 1919. *Engl. Fl.* vol. ii. p. 12.

Ch. álbum. White Goose-foot. Leaves mealy, egg-shaped, inclining to diamond-shaped, jagged, entire at the base, the upper ones oblong, entire: clusters branched, somewhat leafy; seed smooth.——Stem branched, furrowed: the whole plant mealy. Annual: flowers in July and August: grows in waste and cultivated ground. *Engl. Bot.* vol. xxiv. pl. 1723. *Engl. Fl.* vol. ii. p. 13.

Ch. ficifólium. Fig-leaved Goose-foot. Leaves sinuated, jagged, somewhat halbert-shaped, entire at the base, the upper ones oblong, entire; seed dotted.——Greener than the last, and with narrower leaves. Annual: flowers in August and September: grows in waste ground, about London and Yarmouth. *Engl. Bot.* vol. xxiv. pl. 1724. *Engl. Fl.* vol. ii. p. 13.

Ch. glaúcum. Oak-leaved Goose-foot. Leaves all oblong, deeply waved at the edges, glaucous and mealy beneath: clusters compound, leafless.——Stems branched, spreading or prostrate. Annual: flowers in August: grows in waste ground, about London. *Engl. Bot.* vol. xxi. pl. 1454. *Engl. Fl.* vol. ii. p. 14.

** *Leaves undivided and entire at the margin.*

Ch. ólidum. Stinking Goose-foot. Leaves egg-shaped, inclined to diamond-shaped, entire; spikes dense, leafless.——Stems branched, spreading or prostrate: the whole plant greyish green, mealy, greasy, and exhaling a detestable odour, like that of putrid fish. Annual: flowers in August: grows in waste ground and sand, near the sea. *Engl. Bot.* vol. xxi. pl. 1480. *Engl. Fl.* vol. ii. p. 15.

Ch. polyspérmum. All-seed Goose-foot. Leaves egg-shaped, obtuse, entire; stem prostrate; cymose, leafless.——Stem scarcely branched: leaves stalked, deep grass green. Annual: flowers in July and August: grows in waste ground. *Engl. Bot.* vol. xxxi. pl. 1480. *Engl. Fl.* vol. ii. p. 15.

Ch. acutifólium. Sharp-leaved Goose-foot. Leaves egg-shaped, acute, entire, stem erect; clusters spiked, compound, elongated, partly leafy, the lower ones somewhat cymose.——Stem square: leaves pale green. Annual: flowers in July and August: grows in waste and cultivated ground. *Engl. Bot.* vol. xxxi. pl. 1481. *Engl. Fl.* vol. ii. p. 15.

Ch. marítimum. Sea Goose-foot. Leaves awl-shaped, semicylindrical; flowers axillar, sessile.——Stems erect, branched: leaves alternate, sessile. Annual: flowers in July and August: grows on the sea-shore, abundantly. *Engl. Bot.* vol. ix. pl. 633. *Engl. Fl.* vol. ii. p. 16.

43. BETA.

Calyx inferior, of one leaf, deeply divided into five oblong segments, *fleshy at the base*, permanent. Corolla none. Filaments awl-shaped,

as long as the calyx. Anthers roundish, two-lobed. Germen sunk in the calyx below the receptacle of the flower, round, depressed. Styles two, sometimes three, very short. Stigmas acute. Seed solitary, naked, curved, imbedded in the fleshy mass of the calyx, and covered by its segments.

B. marítima. Sea Beet. Stems procumbent; flowers in pairs.—— Root thick and fleshy: stems angular, furrowed, from one to two feet long: leaves deep green: flowers green, sessile, axillar. Perennial: flowers in August: grows on the sea-shore. *Engl. Bot.* vol. iv. pl. 285. *Engl. Fl.* vol. ii. p. 17.

44. SA'LSOLA.

Calyx inferior, of one leaf, deeply divided into five rounded, permanent segments. Corolla none. Filaments awl-shaped, as long as the calyx. Anthers roundish, two-lobed. Germen globular. Styles two or three, united at the base. Stigmas recurved. Capsule egg-shaped, one-celled, imbedded in the fleshy base of the calyx. Seed solitary, roundish, large.

S. Káli. Prickly Saltwort. Herbaceous, decumbent; leaves awl-shaped, thorn-pointed, rough; calyx with a dilated margin.——Stem very bushy, with stiff, channelled leaves: flowers solitary, each with three leaf-like bracteas. Burnt for the alkaline salts which it contains, and which are used in the manufacture of glass. Annual: flowers in July: grows on the sea-shore, among sand. *Engl. Bot.* vol. ix. pl. 634. *Engl. Fl.* vol. ii. p. 18.

S. fruticósa. Shrubby Saltwort. Shrubby, erect; leaves semi-cylindrical, bluntish, thornless.——Stem three feet high, branched: leaves fleshy, ever-green: flowers green, with three membranous bracteas under each. Perennial: flowers in July and August: grows on the sea-coast, in the south of England. *Engl. Bot.* vol. ix. pl. 635. *Engl. Fl.* vol. ii. p. 18.

45. U'LMUS.

Calyx inferior, of one leaf, turbinate, wrinkled, permanent; the limb divided into five, sometimes four or six, erect segments, internally coloured. Corolla none. Filaments generally five, awl-shaped, twice as long as the calyx. Anthers erect, short, with four furrows. Germen oblong, compressed, cleft. Styles two, terminal, spreading, shorter than the stamens. Stigmas downy. Capsule membranous, round or oblong, notched at the end, one-celled. Seed solitary, roundish, slightly compressed.

U. campéstris. Common Elm. Leaves doubly serrate, rough; flowers nearly sessile, four-cleft, with four stamens; capsule oblong, deeply cleft.——A large tree, with rugged bark, and spreading branches: flowers in numerous, round, purplish tufts, each with a fringed bractea at the base. Flowers in March and April: grows in woods, in the south of England. The wood is hard and rough, and is used for axle-trees, mill-wheels, chairs, coffins, &c. *Engl. Bot.* vol. xxvii. pl. 1886. *Engl. Fl.* vol. ii. p. 20.

U. montána. Broad-leaved Elm. Leaves doubly serrate, pointed, rough; flowers stalked, tufted, five or six cleft, with five or six stamens; capsule round, slightly cleft.——A large spreading tree, with large, broadly elliptical leaves. Flowers in March and April: grows in woods, in England and Scotland. *Engl. Bot.* vol. xxvii. pl. 1887. *Engl. Fl.* vol. ii. p. 22.

U. glábra. Smooth-leaved or *Wych Elm.* Leaves doubly serrate, smooth, oblong; flowers nearly sessile, five cleft; capsule inversely egg-shaped, deeply cleft.——A large tree, with smooth branches and leaves. Flowers in March: grows in woods in England. *Engl. Bot.* vol. xxxii. pl. 2248. *Engl. Fl.* vol. ii. p. 23.

46. CUS'CUTA.

Calyx inferior, of one leaf, cup-shaped, deeply divided into five, sometimes four, broad, permanent segments, its base fleshy. Corolla of one petal, with an elliptical tube, the limb divided into five, sometimes four deep, spreading, equal segments. Filaments five or four, awl-shaped, erect, shorter than the corolla, sometimes with a scale at the base. Anthers roundish, two-lobed. Germen roundish. Styles two, sometimes one or three, shorter than the corolla, spreading. Stigma simple or knobbed. Capsule membranous, elliptical, two-celled. Seeds two in each cell, large, inversely egg-shaped, erect.

C. europæ'a. Greater Dodder. Flowers nearly sessile; stamens without a scale at the base; stigmas acute.——Parasitic on nettles, thistles, flax, and other plants: stem thread-like, red, branched, twining: flowers in dense round heads, whitish. Annual: flowers in August and September. *Engl. Bot.* vol. vi. pl. 378. *Engl. Fl.* vol. ii. p. 24.

C. Epithy'mum. Lesser Dodder. Flowers sessile; stamens with a notched scale at the base; stigmas acute.——Parasitic on furze, heath, thyme, and other plants: stem thread-like, twisted: flowers white. Annual: flowers in August. *Engl. Bot.* vol. i. pl. 55. *Engl. Fl.* vol. i. p. 25.

47. GENTIA'NA.

Calyx inferior, of one leaf, divided into five, sometimes four, oblong, acute, permanent segments. Corolla of one petal; tubular in its lower part, the limb deeply divided into five, sometimes four, equal segments. Filaments four or five, awl-shaped, shorter than the corolla. Anthers oblong. Germen oblong, nearly cylindrical, pointed. Styles short, erect. Stigmas flat, egg-shaped. Capsule oblong or elliptical, cylindrical, pointed, slightly cleft, two-valved, one-celled. Seeds numerous, small, compressed, attached to the inflected edges of the valves.

G. Pneumona'nthe. Marsh Gentian. Corolla bell-shaped, five-cleft; flowers stalked; leaves linear.——Stems simple, square, from four to ten inches high: leaves sessile, obtuse: flowers large, few on each stem: corolla deep blue, with five prominent pale greenish angles. Perennial: flowers in August and September: grows in moist pastures

nbes, in Norfolk and the north of England. *Engl. Bot.* vol. i. *Engl. Fl.* vol. ii. p. 27.

érna. Spring Gentian. Corolla salver-shaped, crenate, five-egments lobed at the base; leaves egg-shaped, crowded.——hort, each bearing a single blue flower. Perennial: flowers in grows in mountainous pastures; rare: found in Teesdale Forest ntly, by the Rev. J. Harrian and Mr. Oliver. *Engl. Bot.* vol. 493. *Engl. Fl.* vol. ii. p. 29.

ivális. Small Alpine Gentian. Corolla funnel-shaped, five-cleft, tched intermediate segments; branches alternate, one-flowered. em erect, from one to four inches high, bearing from two to ten : leaves small, elliptical, acute: corolla bright blue, with a h tube. Annual: flowers in August: found on Ben Lawers by ckson. *Engl. Bot.* vol. xiii. pl. 896. *Engl. Fl.* vol. ii. p. 30.

lmarélla. Autumnal Gentian. Corolla salver-shaped, five-cleft, l at the mouth; calyx with five equal segments.——Stem from hes to a foot high, square, erect, panicled, bearing numerous h blue flowers. Annual: flowers in August and September: n pastures; not common. *Engl. Bot.* vol. iv. pl. 236. *Engl.* ii. p. 30.

ampéstris. Field Gentian. Corolla salver-shaped, four-cleft, l at the mouth; two outer segments of the calyx egg-shaped, rge.—Stem from two to six inches high, with egg-shaped acute and purplish blue flowers. Annual: flowers in September tober: grows in dry pastures; common in Scotland, especially the es. *Engl. Bot.* vol. iv. pl. 237. *Engl. Fl.* vol. ii. p. 31.

48. ERY'NGIUM.

ers aggregate. Common receptacle conical, scaly, many-d, each flower having an acute simple or three-cleft scale. Calyx flower superior, of five, pointed, equal, erect leaves. Petals five, oblong, channelled, taper-pointed, inflected about the middle. nts hair-like, straight, longer than the corolla. Anthers roundish. a oblong, covered with erect bristles. Styles thread-like, straight, erect, shorter than the stamens. Stigmas simple. Fruit egg-, bristly, separable into two parts. Seeds oblong, nearly cylin-coated.

aritimum. Sea Eryngo. Root-leaves roundish, plaited, thorny; f flowers stalked; scales of the receptacle three-cleft.——Root rlindrical: stem a foot high, round, branched: petals bright blue. ots are considered stimulating and restorative. Perennial: in July and August: grows in sand on the sea-shore. *Engl.* l. x. pl. 718. *Engl. Fl.* vol. ii. p. 35.

mpéstre. Field Eryngo. Root-leaves twice or thrice pinnatifid; f the receptacle undivided.——More bushy and slender than the etals purplish. Perennial: flowers in July and August: grows e ground, near the sea; rare. *Engl. Bot.* vol. i. pl. 57. *Engl. Fl.* p. 35.

49. HYDROCOTYLE.

ers all perfect and regular. Calyx none. Petals five, equal,

U. montána. Broad-leaved Elm. Leaves doubly serrate, pointed, rough; flowers stalked, tufted, five or six cleft, with five or six stamens; capsule round, slightly cleft.——A large spreading tree, with large, broadly elliptical leaves. Flowers in March and April: grows in woods, in England and Scotland. *Engl. Bot.* vol. xxvii. pl. 1887. *Engl. Fl.* vol. ii. p. 22.

U. glábra. Smooth-leaved or Wych Elm. Leaves doubly serrate, smooth, oblong; flowers nearly sessile, five cleft; capsule inversely egg-shaped, deeply cleft.——A large tree, with smooth branches and leaves. Flowers in March: grows in woods in England. *Engl. Bot.* vol. xxxii. pl. 2248. *Engl. Fl.* vol. ii. p. 23.

46. CUS'CUTA.

Calyx inferior, of one leaf, cup-shaped, deeply divided into five, sometimes four, broad, permanent segments, its base fleshy. Corolla of one petal, with an elliptical tube, the limb divided into five, sometimes four deep, spreading, equal segments. Filaments five or four, awl-shaped, erect, shorter than the corolla, sometimes with a scale at the base. Anthers roundish, two-lobed. Germen roundish. Styles two, sometimes one or three, shorter than the corolla, spreading. Stigma simple or knobbed. Capsule membranous, elliptical, two-celled. Seeds two in each cell, large, inversely egg-shaped, erect.

C. europæ'a. Greater Dodder. Flowers nearly sessile; stamens without a scale at the base; stigmas acute.——Parasitic on nettles, thistles, flax, and other plants: stem thread-like, red, branched, twining: flowers in dense round heads, whitish. Annual: flowers in August and September. *Engl. Bot.* vol. vi. pl. 378. *Engl. Fl.* vol. ii. p. 24.

C. Epithy'mum. Lesser Dodder. Flowers sessile; stamens with a notched scale at the base; stigmas acute.——Parasitic on furze, heath, thyme, and other plants: stem thread-like, twisted: flowers white. Annual: flowers in August. *Engl. Bot.* vol. i. pl. 55. *Engl. Fl.* vol. i. p. 25.

47. GENTIA'NA.

Calyx inferior, of one leaf, divided into five, sometimes four, oblong, acute, permanent segments. Corolla of one petal; tubular in its lower part, the limb deeply divided into five, sometimes four, equal segments. Filaments four or five, awl-shaped, shorter than the corolla. Anthers oblong. Germen oblong, nearly cylindrical, pointed. Styles short, erect. Stigmas flat, egg-shaped. Capsule oblong or elliptical, cylindrical, pointed, slightly cleft, two-valved, one-celled. Seeds numerous, small, compressed, attached to the inflected edges of the valves.

G. Pneumonan'the. Marsh Gentian. Corolla bell-shaped, five-cleft; flowers stalked; leaves linear.——Stems simple, square, from four to ten inches high: leaves sessile, obtuse: flowers large, few on each stem: corolla deep blue, with five prominent pale greenish angles. Perennial: flowers in August and September: grows in moist pastures

and marshes, in Norfolk and the north of England. *Engl. Bot.* vol. i. pl. 20. *Engl. Fl.* vol. ii. p. 27.

G. vérna. Spring Gentian. Corolla salver-shaped, crenate, five-cleft; segments lobed at the base; leaves egg-shaped, crowded.——Stems short, each bearing a single blue flower. Perennial: flowers in April: grows in mountainous pastures; rare: found in Teesdale Forest abundantly, by the Rev. J. Harrian and Mr. Oliver. *Engl. Bot.* vol. vii. pl. 493. *Engl. Fl.* vol. ii. p. 29.

G. nivâlis. Small Alpine Gentian. Corolla funnel-shaped, five-cleft, with notched intermediate segments; branches alternate, one-flowered. ——Stem erect, from one to four inches high, bearing from two to ten flowers: leaves small, elliptical, acute: corolla bright blue, with a greenish tube. Annual: flowers in August: found on Ben Lawers by Mr. Dickson. *Engl. Bot.* vol. xiii. pl. 896. *Engl. Fl.* vol. ii. p. 30.

G. Amarélla. Autumnal Gentian. Corolla salver-shaped, five-cleft, bearded at the mouth; calyx with five equal segments.——Stem from six inches to a foot high, square, erect, panicled, bearing numerous purplish blue flowers. Annual: flowers in August and September: grows in pastures; not common. *Engl. Bot.* vol. iv. pl. 236. *Engl. Fl.* vol. ii. p. 30.

G. campéstris. Field Gentian. Corolla salver-shaped, four-cleft, bearded at the mouth; two outer segments of the calyx egg-shaped, very large.—Stem from two to six inches high, with egg-shaped acute leaves, and purplish blue flowers. Annual: flowers in September and October: grows in dry pastures; common in Scotland, especially the Hebrides. *Engl. Bot.* vol. iv. pl. 237. *Engl. Fl.* vol. ii. p. 31.

48. ERY'NGIUM.

Flowers aggregate. Common receptacle conical, scaly, many-flowered, each flower having an acute simple or three-cleft scale. Calyx of each flower superior, of five, pointed, equal, erect leaves. Petals five, equal, oblong, channelled, taper-pointed, inflected about the middle. Filaments hair-like, straight, longer than the corolla. Anthers roundish. Germen oblong, covered with erect bristles. Styles thread-like, straight, nearly erect, shorter than the stamens. Stigmas simple. Fruit egg-shaped, bristly, separable into two parts. Seeds oblong, nearly cylindrical, coated.

E. maritimum. Sea Eryngo. Root-leaves roundish, plaited, thorny; heads of flowers stalked; scales of the receptacle three-cleft.——Root long, cylindrical: stem a foot high, round, branched: petals bright blue. The roots are considered stimulating and restorative. Perennial: flowers in July and August: grows in sand on the sea-shore. *Engl. Bot.* vol. x. pl. 718. *Engl. Fl.* vol. ii. p. 35.

E. campéstre. Field Eryngo. Root-leaves twice or thrice pinnatifid; scales of the receptacle undivided.——More bushy and slender than the last: petals purplish. Perennial: flowers in July and August: grows in waste ground, near the sea; rare. *Engl. Bot.* vol. i. pl. 57. *Engl. Fl.* vol. ii. p. 35.

49. HYDROCOTYLE.

Flowers all perfect and regular. Calyx none. Petals five, equal,

egg-shaped, undivided, spreading. Filaments awl-shaped, spreading, shorter than the corolla. Anthers roundish. Germen round, compressed, ribbed, smooth. Styles cylindrical, spreading, tumid at the base, shorter than the stamens, permanent. Stigmas simple. Fruit round, compressed, crowned with the permanent styles. Seeds hemispherical, tumid, each with prominent angles.

H. vulgáris. Marsh Penny. White-rot. Leaves round, shield-shaped, smooth, cleft at the base; umbels somewhat aggregate; flowers nearly sessile.——Stems slender, smooth, creeping, with clusters of stalked leaves, and axillar flower-stalks, bearing a simple umbel, with small white flowers. Perennial: flowers in May and June: grows in boggy places, and the edges of lakes and rivulets; common. *Engl. Bot.* vol. xi. pl. 751. *Engl. Fl.* vol. ii. p. 96.

50. SANI'CULA.

Flowers separated, the central barren, the marginal fertile, without stamens. Calyx superior: of the barren flowers small, five-leaved, acute; of the fertile larger, nearly equal. Petals of the barren flowers five, nearly equal, lance-shaped, inflected, channelled, compressed; of the fertile deciduous or wanting. Filaments hair-like, spreading, twice as long as the petals. Anthers roundish. Germen roundish, bristly. Styles reflected, awl-shaped, permanent. Stigmas acute. Fruit egg-shaped, acute, covered with hooked bristles, separable into two. Seeds convex on the outer, flat on the inner side.

S. europæ'a. Wood Sanicle. Root-leaves simple; flowers all nearly sessile.——Stems about a foot long, ascending, slightly branched: umbels numerous, in an irregular compound panicle: flowers cream-coloured, tinged with red. Perennial: flowers in May: grows in woods; very abundant. *Engl. Bot.* vol. ii. pl. 98. *Engl. Fl.* vol. ii. p. 36.

51. ECHINO'PHORA.

Flowers separated: those of the circumference numerous, barren; the outermost irregular, often neutral; the central one solitary, fertile. Calyx superior, of five nearly equal, thorn-pointed, stiff, permanent leaves. Petals of the outermost flowers unequal, each unequally heart-shaped, the point being inflected; of the rest of the barren ones equal, inflected, of the central one wanting. Filaments longer than the petals, thread-like, inflected, equal. Anthers two-lobed. Germen turbinate, in the flowers of the circumference abortive; in the central one imbedded in the base of the flower. Styles erect; in the central flower longest, awl-shaped, permanent. Stigmas obtuse. Fruit egg-shaped, imbedded in the enlarged receptacles, forming a hard prickly coat. Seed solitary, oblong.

E. spinósa. Sea Prickly Sampire. Sea Parsnep. Leaves with thorny, awl-shaped, entire segments.——Copiously branched, with doubly pinnatifid leaves: flowers numerous, white. Perennial: flowers in July: grows on the sandy sea-shore, in England; rare. *Engl. Bot.* vol. xxxiv. pl. 2431. *Engl. Fl.* vol. ii. p. 38.

52. CAU'CALIS.

Flowers imperfectly separated, irregular; the outermost fertile. Calyx superior, of five broad, acute, unequal, permanent leaves. Petals unequal, inversely heart-shaped, with an inflected point. Filaments awl-shaped, shorter than the corolla. Anthers roundish. Germen oblong, bristly. Styles awl-shaped, much shorter than the corolla, tumid at the base, permanent. Stigmas abrupt. Fruit oblong. Seeds four-ribbed, the ribs, covered with ascending, awl-shaped, hooked prickles, flat and close on the inner side.

C. daucoides. Small Bur-parsley. Umbels three-rayed, without general involucral bracteas; partial umbels with three bracteas, ripening about three fruits; leaves repeatedly subdivided.——Stem two feet high, deeply furrowed, smooth, hairy at the joints; partial umbels of two or three fertile flowers with several barren; petals white or reddish. Annual: flowers in June: grows in corn-fields, in England. *Engl. Bot.* vol. iii. pl. 197. *Engl. Fl.* vol. ii. p. 41.

C. latifólia. Great Bur-parsley. Umbels three-rayed with membranous bracteas; partial umbels ripening about five fruits; leaves pinnate.——Stem three feet high, covered with minute prickles: petals bright rose-colour. Annual: flowers in July: grows in corn-fields in England; rare. *Engl. Bot.* vol. iii. pl. 198. *Engl. Fl.* vol. ii. p. 41.

53. TORILIS.

Flowers all perfect and fertile, slightly irregular. Calyx superior, of five short, broad, acute, nearly equal, permanent leaves. Petals nearly equal, inversely heart-shaped, with an inflected point. Filaments hair-like, spreading. Anthers roundish. Germen egg-shaped, bristly. Styles awl-shaped, somewhat spreading, much shorter than the corolla, permanent, very tumid at the base. Stigmas simple. Fruit egg-shaped, crowned with the spreading styles. Seeds without ribs, covered with ascending, awl-shaped prickles, or partly with prominent granulations; their juncture channelled, close.

T. Anthriscus. Upright Hedge-parsley. Umbels of many close rays, with many general bracteas; leaves bipinnate, with pinnatifid leaflets; branches nearly erect.——Stem, erect, two or three feet high, furrowed: flowers small, white: fruit small, with incurved bristles. Annual: flowers in July: grows in hedges and waste places; common. *Engl. Bot.* vol. xiv. pl. 987. *Caucalis Anthriscus. Engl. Fl.* vol. ii. p. 43.

T. infésta. Spreading Hedge-parsley. Umbels of many close rays, with scarcely any general bracteas; leaves pinnate, with pinnatifid leaflets; branches spreading.——Stem about a foot high: flowers white. Annual: flowers in July: grows in corn-fields and by way-sides; common. *Engl. Bot.* vol. xix. pl. 1314. *Caucalis infesta. Engl. Fl.* vol. ii. p. 43.

54. ANTHRI'SCUS.

Flowers all perfect, regular. Calyx none. Petals equal, uniform, inversely heart-shaped, with a small inflected point. Filaments hair-like,

spreading, as long as the corolla. Anthers roundish. Germen oblong, bristly. Floral receptacle slightly bordered. Styles awl-shaped, short, erect, tumid at the base. Stigmas obtuse. Fruit egg-shaped, tumid, beaked. Seeds without ribs, covered with short incurved bristles; the beak angular, naked, much shorter than the body of the fruit, crowned with the permanent styles.

A vulgâris. Common Beaked-parsley. Fruit egg-shaped, twice the length of its beak; leaves thrice pinnate, with pinnatifid leaflets.——Stem two or three feet high, erect, smooth, and glossy, swelled under the joints: flowers small, white, all perfect and fertile. Annual: flowers in May: grows in waste ground, on dry banks, and by road-sides. *Engl. Bot.* vol. xii. pl. 1818. *Scandix Anthriscus. Engl. Fl.* vol. ii. p. 45.

55. SCAN'DIX.

Flowers separated, the innermost barren. Calyx none. Petals unequal, undivided, tapering at the base, spreading. Filaments thread-shaped, spreading, as long as the corolla. Anthers roundish. Germen oblong, rough with close hair. Styles short, permanent, swelled at the base. Stigmas simple, in the barren flowers obtuse. Fruit oblong, ribbed, somewhat bristly, its beak five times as long, linear, bristly, crowned with the enlarged, five-lobed, coloured, floral receptacle, surrounding the base of the styles.

S. Pecten veneris. Needle Chervil. Shepherd's-needle. Venus' Comb. Fruit nearly smooth, with a beak bristly at the edges; umbels simple; leaves thrice pinnatifid, with linear acute segments.——Stem about a foot high, furrowed: umbels small, stalked: flowers white: fruit very large. Annual: flowers from June to September: grows in cultivated fields; common. *Engl. Bot.* vol. xx. pl. 1397. *Engl. Fl.* vol. ii. p. 47.

56. MYR'RHIS.

Flowers imperfectly separated, the innermost barren. Calyx none. Petals somewhat unequal, uniform, inversely heart-shaped, with an inflected point. Filaments thread-shaped, spreading as long as the petal. Anthers roundish. Germen oblong, narrow, somewhat club-shaped, abrupt, smooth, slightly compressed. Styles awl-shaped, very tumid at the base. Stigmas obtuse. Fruit lance-shaped, narrow, deeply furrowed, beakless, smooth; the summit crowned with the thick bases of the spreading, permanent styles.

M. odoràta. Sweet Cicely. Shepherd's-needle. Seeds with very sharp angles, roughish towards the summit.——Stem from two to four feet high, smooth, striated, hollow: leaves thrice pinnated, pale-green: flowers numerous, white: seeds with three very prominent angles. The whole plant is sweet and aromatic: the seeds are used in the north of England for perfuming furniture. Perennial: flowers in May: grows

in pastures and by old walls, generally near houses. *Engl. Bot.* vol. x. pl. 697 : *Scandix odorata. Engl. Fl.* vol. ii. p. 51.

M. temulenta. Rough Cow-Parsley. Seeds furrowed, nearly smooth ; stem rough, swelled under the joints.——Stem from two to three feet high, solid, striated, rough with short deflected hairs, spotted with purple : flowers numerous, white. Biennial : flowers in June and July : grows in hedges and bushy places ; common. *Engl. Bot.* vol. xxii. pl. 1521. *Chærophyllum temulentum. Engl. Fl.* vol. ii. p. 51.

M. aúrea. Tawny-seeded Cow-parsley. Seeds ribbed, nearly smooth, coloured : stems slightly swelled below the joints, hairy; leaflets sharply pinnatifid, long pointed.——Stem three feet high, angular, striated, hairy and bristly : flowers cream-coloured. Perennial : flowers in June : grows in the borders of fields, in Scotland. Between Arbroath and Montrose, and near Corstorphine. Mr. G. Don. *Engl. Bot.* vol. xxx. pl. 2103: *Chærophyllum aureum. Engl. Fl.* vol. ii. p. 52.

M. aromática. Aromatic Cow-Parsley. Seeds ribbed, smooth ; leaflets egg-shaped, acute, serrated, undivided.——Stems two or three feet high, striated, slightly swelled below the joints, hairy below, smooth above : flowers numerous, white, the outer fertile. Perennial : flowers in June : found by Mr. G. Don, between Forfar and Arbroath. *Engl. Bot.* vol. ii. p. 52.

57. CHÆROPHYL'LUM.

Flowers imperfectly separated ; the innermost barren. Calyx, none. Petals somewhat unequal, inversely heart-shaped, with an inflected point. Filaments thread-shaped, spreading, as long as the corolla. Anthers roundish. Germen inferior, oblong, slightly compressed, smooth. Styles short, awl-shaped, tumid at the base. Stigmas simple. Fruit lance-shaped, smooth, even, without furrows or ribs, with a short angular, smooth beak, crowned by the flattened floral receptacle, upon which remain the slightly recurved styles.

Ch. sativum. Garden Chervil. Umbels lateral, nearly sessile ; bracteas lance-shaped.——Stem round, hollow, striated, smooth : leaves twice pinnate : umbels of three or four general rays, and several partial ones : flowers white. Cultivated as a pot-herb. Annual : flowers in June : grows in waste ground ; rare. *Engl. Bot.* vol. xviii. pl. 1268 : *Scandix Cerefolium. Engl. Fl.* vol. ii. p. 48.

Ch. sylvestre. Cow-parsley. Cow-chervil. Umbels terminal, stalked ; bracteas egg-shaped, membranous.——Stem from two to three feet high, branched, hollow, striated or furrowed, downy : leaves thrice pinnate : petals white, in those of the marginal flowers unequal. Perennial : flowers in May and June : grows in hedges, waste places, pastures, and by walls and roads ; very common. Eaten by cattle. *Engl. Bot.* vol. xi. pl. 752. *Engl. Fl.* vol. ii. p. 48.

58. DAU'CUS.

Flowers separated ; the outermost irregular and barren ; inner fertile, the central one generally neutral, often coloured. Calyx obsolete.

Petals inversely heart-shaped, with an inflected point, irregular. Filaments hair-like, spreading, longer than the corolla. Anthers oblong. Germen inferior, egg-shaped, bristly, imperfect in the outermost and central flowers. Styles thread-shaped, spreading, dilated at the base. Stigmas obtuse. Fruit oblong, compressed. Seeds with four principal ribs, having each a row of flattish, straight or hooked prickles, and rough intermediate ribs; their inner surfaces flat and closely applied.

D. Carôta. Wild Carrot. Bristles of the seed slender; leaflets pinnatifid, their segments between linear and lance-shaped, acute; umbel, having in the centre a solitary coloured flower, when in fruit concave.——Root tapering, yellow, sweet, slightly aromatic, bearing no resemblance in taste or colour to the cultivated carrot, which is said to be produced from it; stem from one to two feet high, bristly: umbels terminal, the central flower dark purple. The roots are eaten by the Hebridians. Biennial: flowers in June and July: grows in pastures and the borders of fields; common. *Engl. Bot.* vol. xvii. pl. 1174. *Engl. Fl.* vol. ii. p. 39.

D. marítimus. Sea-coast Carrot. Bristles of the seeds flattened; leaflets dilated, fleshy, pinnatifid, with rounded segments; umbels destitute of a central coloured flower, and convex when in seed.—— Smaller than the former. Biennial: flowers in July and August: grows on the sea-coast, in the south of England. *Engl. Bot.* vol. xxxvi. pl. 2560. *Engl. Fl.* vol. ii. p. 40.

59. BU'NIUM.

Flowers all uniform and regular, many of the innermost barren. Calyx of a few small, acute, spreading leaves. Petals equal, inversely heart-shaped, with an inflected point. Filaments thread-shaped, spreading, longer than the corolla. Anthers roundish. Germen inferior, egg-shaped, ribbed, smooth. Styles awl-shaped, egg-shaped and swelled at the base, spreading, permanent. Stigmas obtuse. Fruit narrow, egg-shaped, ribbed, crowned with the partly obsolete calyx, and the permanent styles. Seeds each with three distant ribs, and intermediate furrows.

B. flexuósum. Earth-nut. General involucral bracteas scarcely three; stem tapering and zigzag at the base; fruit somewhat beaked; leaves thrice pinnatifid, with long acute segments.——Root a large irregular tuber: stem about a foot high: flowers white, all irregular. The root is sweet and eatable. Perennial: flowers in May and June: grows in dry pastures; common. *Engl. Bot.* vol. xiv. pl. 988.

60. SI'UM.

Flowers all uniform, and generally perfect. Calyx superior, of five small, acute, unequal leaves. Petals five, equal, inversely heart-shaped, with an inflected point. Filaments thread-like, spreading, longer than the corolla. Anthers roundish. Germen egg-shaped, striated. Styles cylindrical, spreading, swelling a little at the base, shorter than the

petals. Stigmas obtuse. Fruit egg-shaped, slightly compressed, furrowed, crowned with the permanent styles and withered calyx. Seeds tumid, convex, each five-ribbed.

S. latifólium. Broad-leaved Water-parsnep. Leaves pinnate, with lance-shaped, equally serrate leaflets; umbels terminal.——Stem from three to six feet high, deeply furrowed, smooth: leaves with the stalks enlarged at the base and embracing the stem: flowers numerous, white, small. Poisonous. Perennial: flowers in June and July: grows in rivers, ditches, and marshes. *Engl. Bot.* vol. iii. pl. 204. *Engl. Fl.* vol. ii. p. 56.

S. angustifólium. Narrow-leaved Water-parsnep. Leaves pinnate, with unequally lobed and serrate leaflets; umbels stalked, opposite to the leaves.——Stem about a foot high, striated, smooth: petals white, those of the outermost flowers slightly irregular. Poisonous. Perennial: flowers in July and August: grows in ditches and rivulets. *Engl. Bot.* vol. ii. pl. 139. *Engl. Fl.* vol. ii. p. 56.

S. nodiflórum. Procumbent Water-parsnep. Leaves pinnate, with egg-shaped and equally serrate leaflets; umbels sessile, opposite to the leaves; stem procumbent.——Flowers small, greenish-white, with slightly inflected petals. Perennial: flowers in July and August: grows in ditches and rivulets. The juice is recommended by Dr. Withering, in cutaneous diseases. *Engl. Bot.* vol. ix. pl. 639. *Engl. Fl.* vol. ii. p. 57.

S. répens. Creeping Water-parsnep. Leaves pinnate, with roundish, deeply toothed leaflets; umbels stalked, opposite to the leaves; stem creeping.——Stems from six to ten inches long: flowers white. Perennial: flowers in August: grows in boggy places. *Engl. Bot.* vol. xx. pl. 1431. *Engl. Fl.* vol. ii. p. 58.

S. inundátum. Least Water-parsnep. Leaves pinnate, with wedge-shaped, cut leaflets; the lower leaves divided into numerous thread-like segments.——Stems procumbent or floating: umbels stalked, opposite the leaves: flowers white, all perfect. Perennial: flowers in May: grows in ditches and pools. *Engl. Bot.* vol. iv. pl. 227: *Sison inundatum. Engl. Fl.* vol. ii. p. 58.

S. verticillátum. Whorled Water-parsnep. Leaflets all hair-like, in numerous, whorled segments.——Stem about a foot high, erect, round, striated: leaves chiefly from the root: umbels few, terminal, with numerous white flowers. Perennial: flowers in July and August: grows in salt marshes and wet pastures. *Engl. Bot.* vol. vi. pl. 395. *Engl. Fl.* vol. ii. p. 59.

61. SI'SON.

Flowers all uniform, perfect and regular. Calyx obsolete or bluntly toothed. Petals five, equal, elliptical or inversely heart-shaped, involute at the point. Filaments thread-like, spreading, about half as long as the corolla. Anthers roundish. Germen inferior, egg-shaped, striated. Style very short and thick, each with a very large, tumid base. Stigmas obtuse, distant. Fruit egg-shaped, compressed,

crowned with the permanent, unaltered styles. Seeds convex, each with three ribs.

S. Amómum. Hedge Stonewort. Bastard Stone-parsley. Leaves pinnate, the upper ones ternate; umbels erect, of about four general rays; bases of the styles globular.——Stem about three feet high, erect, with numerous, slender branches: flowers cream-coloured, all regular. Annual: flowers in August: grows in woods and hedges. *Engl. Bot.* vol. xiv. pl. 954. *Engl. Fl.* vol. ii. p. 60.

S. ségetum. Corn-parsley, or *Stonewort.* Leaves pinnate, with numerous roundish leaflets; umbels drooping, irregular; bases of the styles dilated, depressed.——Stems twelve or eighteen inches high, branched, round: flowers white or flesh-coloured, regular. Annual: flowers in August: grows in moist fields. *Engl. Bot.* vol. iv. pl. 228. *Engl. Fl.* vol. ii. p. 61.

62. CICU'TA.

Flowers uniform, perfect, and nearly regular. Calyx superior, of five broad, acute, somewhat unequal leaves. Petals five, egg-shaped, or slightly heart-shaped, with an incurved point. Filaments thread-like, spreading, as long as the corolla. Anthers roundish. Germen hemispherical, ribbed. Styles thread-like, short, erect, little swelled at the base. Stigmas obtuse. Fruit nearly orbicular, heart-shaped at the base, a little compressed, crowned with the permanent calyx and recurved styles. Seeds hemispherical, tumid, each with three double ribs.

C. viros'a. Water Hemlock. Water Cowbane. Leaves twice ternate; leaflets narrow lance-shaped, decurrent.——Root tuberous, hollow, with whorled fibres: stem two or three feet high, furrowed, smooth: umbels stalked: flowers white. Poisonous. Perennial: flowers in August: grows in ditches, lakes, and rivers. *Engl. Bot.* vol. vii. pl. 479. *Engl. Fl.* vol. ii. p. 62.

63. ÆTHU'SA.

Flowers all perfect, the outer one a little irregular. Calyx superior, of five very minute, pointed, spreading leaves. Petals five, inversely heart-shaped, with an acute inflected point, the outermost rather larger. Filaments thread-shaped, horizontal, shorter than the corolla. Anthers roundish. Germen egg-shaped, furrowed. Styles short, spreading, tumid and egg-shaped at the base. Stigmas obtuse. Fruit egg-shaped, crowned by the reflected permanent styles. Seeds egg-shaped, with five tumid, acutely keeled ribs and deep interstices.

Æ. Cynápium. Common Fool's-parsley. Leaves doubly pinnate; leaflets wedge-shaped, decurrent, with lance-shaped segments.——Stem a foot or more high, erect, striated, branched: umbels stalked, terminal: partial bracteas long, acute, pendulous: flowers white. Poisonous; is sometimes mistaken for parsley, and used as such, when it occasions sickness. Annual: flowers in July and August: grows in gardens, cultivated fields, and by walls; common. *Engl. Bot.* vol. xvii. pl. 1192. *Engl. Fl.* vol. ii. p. 64.

64. CONI'UM.

Flowers all perfect, slightly irregular. Calyx obsolete. Petals five, superior, inversely heart-shaped, with an acute inflected point; the uttermost rather larger. Filaments hair-like, scarcely so long as the corolla. Anthers roundish. Germen egg-shaped, a little compressed, furrowed, wrinkled. Styles thread-shaped, spreading, a little swelled at the base. Stigmas obtuse. Fruit egg-shaped, slightly compressed, with ten prominent, acute ribs, crowned with the dilated, undulated floral receptacle, and the spreading styles. Seeds half egg-shaped, each with five acute ribs, the interstices flat.

C. maculátum. Common Hemlock. Stem much branched, polished and spotted.——About three feet high: leaves large, repeatedly compound, with egg-shaped, pinnatifid leaflets: flowers numerous, white, all bearing seeds. The whole plant is fetid and poisonous: it has been used in powder, extract and infusion, in cancerous diseases, and for chronic ulcers. Perennial: flowers in June and July: grows in waste ground, by walls and hedges. *Engl. Bot.* vol. xvii. pl. 1191. *Engl. Fl.* vol. ii. p. 65.

65. ŒNA'NTHE.

Flowers more or less separated or imperfect, the outermost very irregular and abortive; the innermost smaller, regular, and producing fruit. Calyx superior, of five large, lance-shaped, acute, somewhat unequal, permanent leaves. Petals five, inversely heart-shaped, with inflected points; in the fertile flowers nearly equal; in those of the circumference very unequal. Filaments thread-shaped, longer than the corolla. Anthers small, roundish. Germen oblong, furrowed. Styles awl-shaped, tumid at the base. Stigmas small, obtuse, recurved. Fruit oblong or somewhat egg-shaped, with a spongy or corky bark, and three or five unequal ribs, with deep, narrow intermediate furrows; the summit crowned with the permanent calyx and elongated styles. Seeds egg-shaped.

Œ. fistulósa. Common Water-dropwort. Root sending out runners: stem-leaves pinnate, cylindrical, tubular; general bracteas hair-like, few, often wanting.——Stem erect, two or three feet high, hollow, smooth: root-leaves immersed, doubly pinnate, with wedge-shaped, lobed leaflets. Umbels lateral and terminal: flowers white. Perennial: flowers in July and August: grows in ditches and ponds. *Engl. Bot.* vol. vi. pl. 363. *Engl. Fl.* vol. ii. p. 68.

Œ. pimpinelloides. Parsley Water-dropwort. Leaflets of the root-leaves wedge-shaped, cleft; of the others entire, flat, linear; general involucral bracteas linear, numerous.——Stem two feet high, hollow, striated: root-leaves twice pinnate; stem-leaves simply pinnate: flowers flesh-coloured. Perennial: flowers in July: grows in salt marshes. *Engl. Bot.* vol. v. pl. 347. *Engl. Fl.* vol. ii. p. 69.

Œ. peucedánifolia. Sulphur-wort, Water-dropwort. Leaflets all linear; general involucral bracteas none.——Stem three feet high,

erect, solid: flowers white. Perennial: flowers in June: grows in ditches and bogs. *Engl. Bot.* vol. v. pl. 348. *Engl. Fl.* vol. ii. p. 70.

Œ. crocáta. Hemlock Water-dropwort. Leaflets all wedge-shaped, nearly uniform; fruit slender, with small intermediate ribs.——Root of many fleshy knobs: stem branched, furrowed, hollow, from two to four feet high: leaves doubly pinnate: flowers white. The root and stem, when cut, exude a yellowish poisonous juice. The whole plant is fetid and extremely poisonous. A girl from the island of St. Kilda, having ignorantly gathered a quantity of it for the cows of a Hebridian farmer, was so affected by its effluvium that she fainted. Perennial: flowers in July: grows in watery places, generally by rivulets. *Engl. Bot.* vol. xxxiii. pl. 2313. *Engl. Fl.* vol. ii. p. 71.

Œ. Phellándrium. Fine-leaved Water-dropwort. Leaves all uniform, with narrow, wedge-shaped, divaricate segments; fruit egg-shaped, with five broad ribs and narrow intermediate furrows.——Root spindle-shaped: stem from two to three feet high: flowers white. Perennial: flowers in June and July: grows in rivers and ditches. *Engl. Bot.* vol. x. pl. 684. *Engl. Fl.* vol. ii. p. 71.

66. CRITHMUM.

Flowers all regular, perfect and fertile. Calyx superior, of five small, broad, acute, inflected, permanent leaves. Petals five, equal, elliptical, incurved, broad at the base. Filaments thread-shaped, spreading, as long as the corolla. Anthers roundish. Germen elliptical, furrowed. Styles very short and thick, tumid at the base. Stigmas obtuse. Fruit elliptical, crowned by the permanent calyx and styles. Seeds oblong, convex, with a thick leathery coat, each with five ribs; the interstices narrow, flat.

C. marítimum. Sea-Samphire. Leaflets lance-shaped, fleshy; bracteas egg-shaped.——Stems about a foot high, round, leafy: leaves twice-ternate: flowers white. The whole plant is glaucous, smooth, fleshy, with a salt aromatic flavour, and is used as a pickle. Perennial: flowers in August: grows on rocks by the sea. *Engl. Bot.* vol. xii. pl. 819. *Engl. Fl.* vol. ii. p. 73.

67. SMYRNIUM.

Flowers nearly uniform and regular, the innermost barren. Calyx superior, of five very minute, acute, permanent leaves. Petals five, equal, lance-shaped, incurved. Filaments hair-like, as long as the corolla. Anthers roundish. Germen egg-shaped, angular and furrowed. Styles thread-shaped, spreading, tumid, and somewhat depressed at the base. Stigmas simple. Fruit roundish, ribbed, crowned with the styles or their bases. Seeds with three prominent, acute ribs; the interstices convex.

S. Olusátrum. Alexanders. Stem-leaves ternate, stalked, serrate.——Root fleshy, branching: stem two or three feet high, solid, branched: lower leaves twice ternate: flowers small, white, bitter and aromatic: formerly cultivated for culinary purposes. Biennial: flowers in May:

grows in waste ground, about ruins, and on rocks near the sea. *Engl. Bot.* vol. iv. pl. 230. *Engl. Fl.* vol. ii. p. 74.

68. A'PIUM.

Flowers uniform, nearly regular, almost all perfect and fertile. Calyx obsolete. Petals five, superior, roundish, with an inflected point, all nearly equal. Filaments thread-shaped, as long as the corolla. Anthers roundish. Germen nearly globular. Styles thread-shaped, reflected, greatly swelled at the base. Floral receptacle round, flattened. Stigmas obtuse. Fruit egg-shaped or round, slightly compressed, crowned with the withered receptacle and spreading styles. Seeds egg-shaped, with acute ribs, the interstices flat.

A. graveolens. Wild-Celery. Leaflets of the stem-leaves wedge-shaped; stem furrowed.——Stems two feet long, spreading or floating: leaves pinnate or ternate: flowers small, numerous, greenish-white. Biennial: flowers in August and September: grows in ditches and marshy ground. Fetid, acrid, and noxious: becoming mild by cultivation. *Engl. Bot.* vol. xvii. pl. 1210. *Engl. Fl.* vol. ii. p. 76.

69. ÆGOPODIUM.

Flowers all perfect and fertile, the outermost slightly irregular. Calyx none. Petals inversely heart-shaped, broad, with an inflected point; the outer one, in the marginal flowers, a little larger. Filaments thread-shaped, spreading as long as the petals. Anthers roundish. Germen roundish, furrowed. Styles at first short, erect, tumid and egg-shaped at the base; afterwards thread-shaped, elongated, reflected. Stigmas knobbed. Fruit elliptical, slightly compressed, crowned with the reflected styles. Seeds oblong, slightly incurved, each with five prominent ribs; the interstices nearly flat.

Æ. Podagraria. Gout-weed. Herb Gerarde.——Stem from one to two feet high, erect, hollow, furrowed: lower leaves twice ternate, stalked: upper ternate and nearly sessile: leaflets egg-shaped, serrated, smooth, dark green: umbels large: flowers crowded, white. Perennial: flowers in May and June: grows in shady places, church-yards, and rich cultivated ground. *Engl. Bot.* vol. xiv. pl. 940. *Engl. Fl.* vol. ii. p. 77.

70. IMPERATO'RIA.

Flowers all perfect and fertile, the outermost very slightly irregular. Calyx none. Petals inversely heart-shaped, with an incurved point. Filaments thread-shaped, spreading, longer than the petals. Anthers globular. Germen inferior, round, compressed, ribbed. Styles short, distant, egg-shaped, very tumid at the base. Fruit round, crowned with the bases of the styles, having a hollow above and below, and a rounded, dilated margin. Seeds convex, with three prominent ribs, and a broad flat border.

I. Ostruthium. Great Masterwort. Lower leaves twice ternate,

upper three-lobed.——Root fleshy: stem from one to two feet high, erect, hollow, striated: umbels of about forty general rays: flowers small, white. The root is warm and aromatic, and has been used for various purposes. Perennial: flowers in June: grows in various places in Scotland. *Engl. Bot.* vol. xx. pl. 1380. *Engl. Fl.* vol. ii. p. 78.

71. ANGE'LICA.

Flowers all perfect, fertile and regular. Calyx none. Petals five, superior, equal, lance-shaped, flattish, with an inflected point, their base narrow. Filaments thread-shaped, spreading, longer than the corolla. Anthers roundish. Germen egg-shaped, strongly furrowed. Styles at first very short, erect, broad and tumid at the base; afterwards elongated and recurved. Stigmas knobbed. Floral receptacle thin, waved, ultimately projecting a little beyond the bases of the styles. Fruit elliptical, slightly compressed, bordered, crowned with the floral receptacle and styles. Seeds oblong, with three longitudinal wings, and a flat border; the interstices wrinkled.

A. sylvéstris. Wild Angelica. Leaflets equal, egg-shaped, serrate. ——Stem three feet high, round, polished, with spreading branches: leaves twice pinnate, smooth: umbels convex, with numerous general and partial rays: bracteas slender: flowers white. Bitter and aromatic. Perennial: flowers in July: grows in watery places, and moist woods. *Engl. Bot.* vol. xvi. pl. 1128. *Engl. Fl.* vol. ii. p. 81.

72. LIGU'STICUM.

Flowers all perfect, fertile and regular. Calyx superior, of five small, pointed, erect, permanent leaves, broad at the base. Petals five, elliptical, flattish, with an inflected point, their base narrow. Filaments thread-shaped, spreading, shorter than the corolla. Anthers roundish. Germen oblong, abrupt, furrowed. Styles at first short, erect, angular, swelled at the base; afterwards a little elongated, spreading. Stigmas simple. Fruit oblong, somewhat compressed, crowned with the calyx and styles. Seeds oblong, each with five longitudinal wings.

L. scóticum. Scottish Lovage. Leaves twice ternate.——Root fleshy, tapering. Stem a foot high, striated, smooth; leaves stalked, the uppermost ternate, the leaflets broad, smooth, serrate, entire at the base, dark-green: flowers white, with a reddish tinge. The root is acrid, and is occasionally chewed by the Hebridians as a substitute for tobacco. Perennial: flowers in July: grows on the sea-coast; very abundant in Scotland. *Engl. Bot.* vol. xviii. pl. 1207. *Engl. Fl.* vol. ii. p. 82.

L. cornubiénse. Cornish Lovage. Root-leaves twice or thrice pinnate, rough-edged, cut; Stem-leaves ternate, lance-shaped entire.—— Root tapering: stem two or three feet high, erect, roughish, striated: petals white. Perennial: flowers in July: grows in bushy fields in Cornwall. *Engl. Bot.* vol. x. pl. 683. *Engl. Fl.* vol. ii. p. 82. *See Brit. Fl.* p. 133.

73. ME'UM.

Flowers all uniform, perfect and fertile. Calyx none. Petals five, superior, equal, inversely egg-shaped, with an inflected point. Filaments thread-like, spreading, incurved, as long as the petals. Anthers roundish. Germen egg-shaped, striated, abrupt, a little compressed. Styles at first very short, tumid at the base, afterwards a little elongated and recurved. Stigmas simple. Fruit elliptical, very slightly compressed, contracted at the summit, and crowned with the styles. Seeds convex, with five prominent ribs, the interstices nearly flat and even; their juncture nearly as broad as themselves.

M. athamanticum. Spignel. Meu. Bald-money. Leaflets all in numerous hair-like segments; general and partial involucral bracteas. ——Root thick and woody, with the fibrous remains of the old leaf-stalks adhering to it: stems from one to two feet high: leaves doubly pinnate: flowers yellowish-white. The whole plant, and especially the root, highly aromatic. Perennial: flowers in May and June: grows in hilly pastures in the north of England and the Highlands of Scotland. *Engl. Bot.* vol. xxxii. pl. 2249. *Engl. Fl.* vol. ii. p. 84.

M. Fœniculum. Common Fennel. Leaves thrice pinnate; leaflets awl-shaped, drooping; no bracteas.——Stem three or four feet high, erect, much branched, striated, smooth: umbels terminal, very broad: flowers golden yellow. Aromatic: the seeds are used as a carminative for infants. Perennial: flowers in July and August: grows on chalk cliffs in England. *Engl. Bot.* vol. xvii. pl. 1208: *Anethum Fœniculum. Engl. Fl.* vol. ii. p. 85.

74. CA'RUM.

Flowers separated, somewhat irregular; the innermost barren; those of the circumference perfect and productive. Calyx superior, of five very minute, acute leaves, often wanting. Petals five, somewhat unequal, inversely heart-shaped, with inflected points. Filaments hair-like, straight spreading, as long as the petals. Anthers roundish. Germen egg-shaped, abrupt. Styles at first very short, tumid at the base, afterwards elongated, thread-shaped, spreading. Stigmas bluntish. Floral receptacle ring-like, thin, waved, extending beyond the bases of the styles. Fruit elliptical, compressed, crowned with the receptacle and styles. Seeds nearly cylindrical, narrow at both ends, with five acute slender ribs; the interstices somewhat convex, smooth.

C. Cárui. Common Caraway. Stem branched; partial bracteas none.——Root tapering: stem about two feet high, erect, angular and furrowed: lower leaves stalked, doubly pinnate, with numerous finely cut leaflets; upper leaves opposite, very unequal: umbels numerous, erect: flowers numerous, white. Cultivated for its seeds which are carminative. Biennial: flowers in June: grows in meadows and pastures. *Engl. Bot.* vol. xxi. pl. 1503. *Engl. Fl.* vol. ii. p. 86.

75. ATHAMA'NTA.

Flowers imperfectly separated, regular, the innermost abortive.

Calyx superior, of five lance-shaped, acute, permanent leaves. Petals five, inversely heart-shaped, with a broad inflected point. Filaments thread-shaped, spreading, incurved, longer than the petals. Anthers roundish. Germen egg-shaped, abrupt, downy. Styles at first short, erect, each with a large tumid base; afterwards spreading; finally reflected. Stigmas bluntish. Fruit egg-shaped, slightly compressed, hairy, ribbed, crowned by the calyx and styles. Seeds egg-shaped, each with five prominent ribs. Juncture close, as broad as the seeds.

A. Libanótis. Mountain Stone-parsley. Leaves doubly pinnate, cut; umbels hemispherical.——Stem from one to three feet high: flowers white. Perennial: flowers in August: grows in elevated pastures in England; rare. *Engl. Bot.* vol. ii. pl. 198. *Engl. Fl.* vol. ii. p. 88.

76. PIMPINE'LLA.

Flowers regular, perfect or dicœcious. Calyx none. Petals five, superior, equal, inversely heart-shaped, with an inflected point. Filaments hair-like, spreading, longer than the corolla. Anthers roundish. Germen egg-shaped, a little compressed, smooth, finely ribbed. Styles hair-like, somewhat spreading, at first short, afterwards elongated, tumid and nearly globular at the base. Stigmas obtuse. Fruit egg-shaped, crowned by the long styles. Seeds egg-shaped, each with five rather sharp ribs.

P. Saxifraga. Common Burnet-saxifrage. Leaves pinnate; leaflets of the root-leaves roundish, of the uppermost with linear segments. ——Stems from one to two feet high, striated, downy: flowers white, small. Perennial: flowers in July and August: grows in dry pastures. *Engl. Bot.* vol. vi. pl. 407. *Engl. Fl.* vol. ii. p. 89.

P. mágna. Greater Burnet-saxifrage. Leaves pinnate; leaflets all egg-shaped, serrate, somewhat cut; the terminal one three-lobed. ——Taller than the last, with white flowers. Perennial: flowers in July and August: grows in shady places and hedges in several parts of England. *Engl. Bot.* vol. vi. pl. 408. *Engl. Fl.* vol. ii. p. 90.

P. dióica. Dwarf Burnet-saxifrage. Leaves doubly pinnate, with nearly linear leaflets; umbels panicled; flowers dicœcious.——About a foot high: flowers cream-coloured. Perennial: flowers in May and June: grows on rocks in England; rare. *Engl. Bot.* vol. xvii. pl. 1209. *Engl. Fl.* vol. ii. p. 90.

77. CNI'DIUM.

Flowers nearly regular, imperfectly separated. Calyx none. Petals five, superior, equal, inversely egg-shaped or heart-shaped, with an inflected point. Filaments thread-shaped, spreading, as long as the petals. Anthers roundish. Germen egg-shaped, slightly compressed, ribbed. Styles at first very short, afterwards elongated, spreading, cylindrical, tumid and nearly hemispherical at the base. Stigmas blunt. Floral receptacle ring-shaped, thin, undulated. Fruit egg-shaped, a little compressed, crowned with the floral receptacle and spreading or re-

73. ME'UM.

Flowers all uniform, perfect and fertile. Calyx none. Petals five, superior, equal, inversely egg-shaped, with an inflected point. Filaments thread-like, spreading, incurved, as long as the petals. Anthers roundish. Germen egg-shaped, striated, abrupt, a little compressed. Styles at first very short, tumid at the base, afterwards a little elongated and recurved. Stigmas simple. Fruit elliptical, very slightly compressed, contracted at the summit, and crowned with the styles. Seeds convex, with five prominent ribs, the interstices nearly flat and even; their juncture nearly as broad as themselves.

M. athamanticum. Spignel. Meu. Bald-money. Leaflets all in numerous hair-like segments; general and partial involucral bracteas. ——Root thick and woody, with the fibrous remains of the old leaf-stalks adhering to it: stems from one to two feet high: leaves doubly pinnate: flowers yellowish-white. The whole plant, and especially the root, highly aromatic. Perennial: flowers in May and June: grows in hilly pastures in the north of England and the Highlands of Scotland. *Engl. Bot.* vol. xxxii. pl. 2249. *Engl. Fl.* vol. ii. p. 84.

M. Fœniculum. Common Fennel. Leaves thrice pinnate; leaflets awl-shaped, drooping; no bracteas.——Stem three or four feet high, erect, much branched, striated, smooth: umbels terminal, very broad: flowers golden yellow. Aromatic: the seeds are used as a carminative for infants. Perennial: flowers in July and August: grows on chalk cliffs in England. *Engl. Bot.* vol. xvii. pl. 1208: *Anethum Fœniculum. Engl. Fl.* vol. ii. p. 85.

74. CA'RUM.

Flowers separated, somewhat irregular; the innermost barren; those of the circumference perfect and productive. Calyx superior, of five very minute, acute leaves, often wanting. Petals five, somewhat unequal, inversely heart-shaped, with inflected points. Filaments hair-like, straight spreading, as long as the petals. Anthers roundish. Germen egg-shaped, abrupt. Styles at first very short, tumid at the base, afterwards elongated, thread-shaped, spreading. Stigmas bluntish. Floral receptacle ring-like, thin, waved, extending beyond the bases of the styles. Fruit elliptical, compressed, crowned with the receptacle and styles. Seeds nearly cylindrical, narrow at both ends, with five acute slender ribs; the interstices somewhat convex, smooth.

C. Cárui. Common Caraway. Stem branched; partial bracteas none.——Root tapering: stem about two feet high, erect, angular and furrowed: lower leaves stalked, doubly pinnate, with numerous finely cut leaflets; upper leaves opposite, very unequal: umbels numerous, erect: flowers numerous, white. Cultivated for its seeds which are carminative. Biennial: flowers in June: grows in meadows and pastures. *Engl. Bot.* vol. xxi. pl. 1503. *Engl. Fl.* vol. ii. p. 86.

75. ATHAMA'NTA.

Flowers imperfectly separated, regular, the innermost abortive.

superior, of five acute, permanent teeth. Petals five, inversely heart-shaped, with inflected points. Filaments hair-like, spreading, longer than the petals. Anthers roundish. Germen oblong. Styles small, recurved, tumid at the base. Stigmas obtuse, notched. Fruit broadly elliptical, nearly round, compressed, crowned with the calyx and styles. Seeds broadly elliptical, notched at both ends, nearly flat, with three slightly prominent ribs, the interstices striated, the margin dilated, with a flat, entire, narrow ring. Juncture broad, flat, close.

P. officinàle. Sea Sulphur-wort. Leaves five times deeply divided into three, with linear, flat leaflets; bracteas linear.——Stem three feet high: flowers yellow. The roots are fetid and acrid. Perennial: flowers in June and July: grows in salt marshes in Sussex and Essex. *Engl. Bot.* vol. xxv. pl. 1767. *Engl. Fl.* vol. ii. p. 99.

81. PASTINA'CA.

Flowers regular, uniform, perfect. Calyx superior, of five very minute teeth. Petals five, broadly lance-shaped, pointed, involute. Stamens thread-shaped, spreading, as long as the petals. Anthers roundish. Germen egg-shaped, obscurely striated. Styles at first very short, erect, afterwards elongated, spreading, recurved; greatly dilated at the base. Stigmas knobbed. Fruit broadly elliptical, transversely compressed, crowned by the broad, round, waved, floral receptacle and the styles. Seeds broadly elliptical, with a slight notch at the top, flattish at the back, with three ribs, and two more prominent and broader ones at the circumference, their border narrow, thin, acute. Juncture close, flat, nearly as broad as the seeds.

P. sativa. Common Wild Parsnep. Leaves simply pinnate, downy beneath.——Root spindle-shaped: stem three feet high, erect: flowers yellow, small. Biennial: flowers in July: grows at the edges of fields. *Engl. Bot.* vol. viii. pl. 556. *Engl. Fl.* vol. ii. p. 101.

82. HERA'CLEUM.

Inner flowers barren; those of the circumference perfect and fertile. Calyx superior, of five small, acute teeth. Petals five, inversely heart-shaped, with one inflected point; in the innermost flowers smallest and nearly equal; in the outer much larger, irregular, the outer one largest, and the two inner smallest. Filaments thread-shaped, longer than the corolla, spreading, a little incurved. Anthers roundish. Germen egg-shaped, slightly compressed transversely. Styles at first erect, rather short, afterwards flattened, spreading; broad and pyramidal at the base. Stigmas obtuse, notched. Floral receptacle undulated, crenate, a little broader than the base of the styles. Fruit inversely heart-shaped, nearly flat, crowned with the floral receptacle and styles. Seeds inversely heart-shaped, deeply notched at the top, and more or less so at the base, with five ribs; four intermediate coloured lines in the interstices; the border narrow, flat. Juncture close, flat, nearly as broad as the seeds.

H. Sphondylium. Cow-parsnep. Hogweed. Leaves pinnate; leaflets pinnatifid, cut and serrate.——Stem about four feet high, branched, furrowed, rough with spreading hairs. One of the most important of our plants as food for domestic animals, although utterly neglected. The stem is eat in the Hebrides. Biennial: flowers in July: grows in hedges, borders of fields, and pastures. *Engl. Bot.* vol. xiv. pl. 939. *Engl. Fl.* vol. ii. p. 102.

83. TORDY'LIUM.

Flowers separated, irregular, those of the circumference fertile. Calyx of five unequal, awl-shaped teeth. Petals five: one of the innermost flowers smallest, nearly equal and uniform, inversely heart-shaped, with an inflected point; of the circumference of the same form, the outermost largest. Filaments, thread-shaped, spreading. Anthers roundish. Germen egg-shaped, rugged or bristly, transversely compressed. Styles, thread-shaped, erect, swelled at the base, afterwards spreading. Stigmas simple. Fruit nearly round, transversely compressed, crowned with the tumid bases of the styles. Seeds of the same form, indistinctly striated, sometimes rough.

T. máximum. Great Hart-wort. Leaflets lance-shaped, deeply serrated; flowers somewhat radiant, the outermost petal with equal lobes; stem rough, with close deflected bristles.——Stem three or four feet high: flowers reddish. Annual: flowers in June and July: grows in waste ground, in England; rare. *Engl. Bot.* vol. xvii. pl. 1173. *Engl. Fl.* vol. ii. p. 105.

TRIGYNIA.

84. VIBU'RNUM.

Calyx superior, minute, of one leaf, deeply divided into five segments, permanent. Corolla of one petal, bell-shaped, with five obtuse, spreading segments. Filaments awl-shaped, spreading, as long as the corolla. Anthers roundish. Germen roundish. Style none. Stigmas three, sessile, obtuse. Berry roundish, one-celled, seed solitary, roundish, compressed.

V. Lantána. Way-faring Tree. Mealy Guelder-rose. Leaves heart-shaped, serrate, veined, downy beneath.——A small tree with opposite, pliant, mealy branches: cymes broad, of numerous white flowers: berries black. The bark of the root is used for making bird-lime. Flowers in May: grows in woods and hedges. *Engl. Bot.* vol. v. pl. 331. *Engl. Fl.* vol. ii. p. 107.

V. Opulus. Common Guelder-rose. Water Elder. Leaves lobed, their stalks beset with glands.——A small tree, with three-lobed, serrate, veined leaves: cymes large, white: several of the marginal flowers are dilated, without stamens or pistils. In the cultivated state nearly the whole cyme consists of such flowers: berries bright red. Flowers in June: grows in woods and wet hedges. *Engl. Bot.* vol. v. pl. 332. *Engl. Fl.* vol. ii. p. 107.

85. SAMBU'CUS.

Calyx superior, of one leaf, small, deeply divided into five segments, permanent. Corolla of one petal, nearly wheel-shaped, but concave, with five obtuse segments. Filaments awl-shaped, as long as the corolla. Anthers roundish. Germen egg-shaped, obtuse. Style none. Stigmas three, obtuse. Berry globular, one-celled. Seeds three, convex externally, angular on the inner side.

S. E'bulus. Dwarf Elder. Cymes with three principal branches; stipules leaf-like; stem herbaceous.——Stems simple, erect, about three feet high: leaves pinnate, with lance-shaped, acute, serrate, smooth leaflets: cymes large, with purplish flowers: berries globular, black. The berry is purgative and emetic. Perennial: flowers in June: grows in woods and hedges. *Engl. Bot.* vol. vii. pl. 475. *Engl. Fl.* vol. ii. p. 108.

S. nigra. Common Elder. Cymes with five principal branches; stipules obsolete; leaflets egg-shaped; stem woody.——A small tree, with smooth branches, filled with light spongy pith: cymes large, of numerous cream-coloured flowers: berries globular, purplish black. The inner green bark is purgative and diuretic, as are the leaves. The berries made into rob are gently laxative; they are also used for making a kind of wine, as well as for adulterating Port. Flowers in July: grows in woods and hedges. *Engl. Bot.* vol. vii. pl. 476. *Engl. Fl.* vol. ii. p. 109.

86. STAPHYLE'A.

Calyx inferior, of one leaf, concave, deeply divided into five coloured segments, as large as the corolla. Petals five, oblong, erect, similar to the calyx. Nectary cup-shaped, central. Filaments thread-shaped, erect, as long as the petals. Anthers roundish. Germen rather thick, with two or three deep divisions. Styles, two or three, erect, a little longer than the stamens. Stigmas obtuse, close together. Capsules two or three, inflated, united lengthwise. Seeds two in each capsule, globular, with a circular pit at the side, and an oblique, lateral point.

S. pinnáta. Common Bladder-nut. Leaves pinnate; style and capsules only two.——A smooth-branched shrub, with numerous suckers, and pale greenish-yellow flowers. Flowers in June: grows in hedges and thickets in Yorkshire. *Engl. Bot.* vol. xxii. pl. 1560. *Engl. Fl.* vol. ii. p. 110.

87. TA'MARIX.

Calyx inferior, of one leaf, deeply divided into five obtuse, erect, permanent segments, half as long as the corolla. Petals five, inversely egg-shaped, concave, spreading. Filaments hair-like, arising from the calyx, sometimes with five intermediate ones. Anthers roundish. Germen egg-shaped, pointed. Style none. Stigmas three, revolute, obtuse,

downy. Capsule oblong, pointed, triangular, longer than the calyx, one-celled, three-valved. Seeds numerous, minute, with a stalked feathery crown.

T. gállica. French Tamarisk. Stamens five; lateral clusters numerous; leaves lance-shaped, acute, spurred at the base; branches smooth.——A small shrub, with numerous red, shining branches; minute, scattered leaves; and clusters of reddish or white flowers: flowers in July: grows on rocks in the south of England. *Engl. Bot.* vol. xix. pl. 1318. *Engl. Fl.* vol. ii. p. 112.

88. CORRIGI'OLA.

Calyx inferior, of five inversely egg-shaped, spreading, permanent leaves, as large as the corolla. Petals five, inversely egg-shaped, entire, spreading. Filaments awl-shaped, small, not half so long as the petals. Anthers two-lobed. Germen egg-shaped, three-cornered. Styles three, short, spreading. Stigmas obtuse. Seed solitary, large, naked, roundish, three cornered, wrinkled, covered by the closed calyx.

C. littorális. Sand Strapwort.——Root tapering, small: stems spreading on the ground: leaves between lance-shaped and linear, glaucous: clusters terminal and lateral: flowers numerous, white. Annual: flowers in July and August: grows on the southern coast of England. *Engl. Bot.* vol. x. pl. 668. *Engl. Fl.* vol. ii. p. 113.

TETRAGYNIA.

89. PARNA'SSIA.

Calyx inferior, of one leaf, deeply divided into five oblong, spreading, permanent segments. Petals five, egg-shaped, spreading, longer than the calyx, with several longitudinal ribs. Nectaries five fleshy scales, attached to the claws of the petals, fringed with a row of bristles, each bearing a small transparent globe. Filaments awl-shaped, spreading. Anthers heart-shaped, flattened. Germen egg-shaped, large. Styles none. Stigmas four, obtuse, permanent. Capsule egg-shaped, four-cornered, four-celled, four-valved. Receptacles four, linear, abruptly terminating the partitions, which are from the middle of each valve. Seeds numerous, oblong.

P. palústris. Common Grass of Parnassus. Leaves heart-shaped; bristles of each nectary numerous.——Stems about six inches high, angular, twisted. One of the most beautiful and elegant of our native plants. Perennial: flowers in September and October: grows in boggy places. *Engl. Bot.* vol. ii. pl. 82. *Engl. Fl.* vol. ii. p. 114.

PENTAGYNIA.

90. STA'TICE.

Calyx inferior, of one leaf, funnel-shaped; tube contracted; limb undivided, plaited, membranous, permanent. Corolla funnel-shaped,

of five petals, contracted and united at the base, dilated upwards, obtuse, spreading. Filaments awl-shaped, shorter than the petals. Anthers oblong. Germen roundish, very minute. Styles thread-shaped, spreading, permanent. Stigmas acute. Capsule oblong, membranous, one-celled, one-valved, with five points; covered by the permanent calyx. Seed solitary, oblong.

S. Arméria. Common Thrift. Sea Gilliflower. Stalks simple; flowers in a head; awns of the calyx minute; leaves linear.——Root long, branched, woody: stalks from three to nine inches high: flowers numerous, rose-coloured, forming a close head. Perennial: flowers in July and August: grows on the sea-shore, in sandy ground, and the clefts of rocks; also on the summits of high mountains. *Engl. Bot.* vol. iv. pl. 226. *Engl. Fl.* vol. ii. p. 115.

S. Limónium. Lavender Thrift. Stalks panicled; leaves elliptical, smooth, bristle-pointed.——Root woody, leaves leathery: panicle with several close spikes of erect blue flowers. Perennial: flowers in July and August: grows on the sea-shore, in England and the south of Scotland. *Engl. Bot.* vol. ii. pl. 102. *Engl. Fl.* vol. ii. p. 116.

S. spathuláta. Upright-spiked Thrift. Stalks panicled, with two-rowed branches and erect spikes; leaves spatulate, with a minute point from the midrib, at the tip.——Leaves leathery, three-ribbed at the base: stalk slightly waved above. Perennial: flowers in August. grows on the sea-shore in Kent, near Whitehaven, and on the Mull of Galloway. *Brit. Fl.* p. 145.

S. reticuláta. Matted Thrift. Stalks panicled, prostrate, zig-zag, the lower branches sterile; leaves somewhat wedge-shaped, acute. ——Root woody: panicle with several spikes of purplish-blue flowers. Perennial: flowers in July and August: grows on the sea-shore, in Norfolk. *Engl. Bot.* vol. v. pl. 328. *Engl. Fl.* vol. ii. p. 117.

91. LI'NUM.

Calyx inferior, of five lance-shaped, erect, permanent leaves, smaller than the corolla. Petals five, oblong, obtuse, narrow below, moderately spreading. Filaments five, awl-shaped, erect, as long as the calyx, and five shorter intermediate ones. Anthers arrow-shaped. Germen egg-shaped. Styles thread-shaped, erect, as long as the stamens. Stigmas bluntish, spreading. Capsule nearly globular, obscurely five-sided, ten-celled, ten-valved. Seeds solitary, egg-shaped, acute, compressed, polished.

* *Leaves alternate.*

L. usitatíssimum. Common Flax. Calyx-leaves egg-shaped, acute, three-ribbed; petals crenate; leaves lance-shaped, alternate; stem commonly solitary, erect.——Stem nearly two feet high, straight, round, corymbose at the top: flowers erect with blue-veined petals. The uses of the fibres of the stem, and the expressed oil of the seeds are well known. Annual: flowers in July: grows in cultivated fields. *Engl. Bot.* vol. xix. pl. 1357. *Engl. Fl.* vol. ii. p. 118.

L. perénne. Perennial Flax. Calyx-leaves inversely egg-shaped,

obtuse, obscurely five-ribbed; leaves narrow lance-shaped, alternate; stems numerous, ascending.——Root woody: stems about a foot high: flowers blue, veined. Perennial: flowers in June and July: grows in dry pastures and meadows in England. *Engl. Bot.* vol. i. pl. 40. *Engl. Fl.* vol. ii. p. 118.

L. angustifólium. Narrow-leaved Flax. Calyx-leaves elliptical, three-ribbed; leaves narrow, lance-shaped, three-ribbed; stems numerous, nearly erect.——Petals pale purple. Perennial: flowers in July: grows in sandy pastures, in England. *Engl. Bot.* vol. vi. pl. 381. *Engl. Fl.* vol. ii. p. 119.

** *Leaves opposite.*

L. cathárticum. Purging Flax. Leaves opposite, oblong: stem forked above; petals acute.——Stem thread-like, from six inches to a foot high: flowers white, at first pendulous. Bitter and purgative. Annual: flowers in July and August: grows in dry pastures; common. —*Engl. Bot.* vol. vi. pl. 382. *Engl. Fl.* vol. ii. p. 120.

92. SIBBA'LDIA.

Calyx inferior, of one leaf, with ten elliptical, spreading, permanent marginal segments. Petals five, inversely egg-shaped, tapering at the base. Filaments five, awl-shaped, shorter than the petals. Anthers roundish. Germens five, sometimes ten, egg-shaped, compressed. Styles from the side of each germen, as long as the stamens. Stigmas obtuse. Seeds five, egg-shaped, smooth, compressed, in the bottom of the enlarged calyx, which is closed over them.

S. procúmbens. Procumbent Sibbaldia. Leaves ternate: leaflets wedge-shaped with three terminal teeth.——Roots woody, tufted: stems spreading or procumbent, from one to three inches long: calyx large, hairy: petals small, yellow. Perennial: flowers in July: grows on the summits of the higher mountains of Scotland. *Engl. Bot.* vol. xiii. pl. 897. *Engl. Fl.* vol. ii. p. 121.

HEXAGYNIA.

93. DRO'SERA.

Calyx inferior, of one leaf, deeply divided into five acute, permanent segments. Petals from five to eight, nearly egg-shaped, obtuse. Filaments from five to eight, awl-shaped, as long as the calyx. Anthers small, roundish. Germen roundish. Styles from six to eight, simple, as long as the stamens. Stigmas club-shaped. Capsule egg-shaped, one-celled, with three or four valves. Seeds numerous, minute, inversely egg-shaped, attached to the middle of each valve.

D. rotundifólia. Round-leaved Sun-dew. Leaves round, on hairy stalks; flower-stalks from the root, forming a simple cluster.——*Leaves* from the root, numerous, lying close to the ground, tapering into a flat hairy stalk, and beset with red hairs, discharging a drop of clammy fluid from their tips: petals five, white. Perennial: flowers

in July and August: grows in bogs and on wet heaths; common. *Engl. Bot.* vol. xiii. pl. 867. *Engl. Fl.* vol. ii. p. 122.

D. longifólia. Long-leaved Sun-dew. Leaves inversely egg-shaped, on smooth stalks; flower-stalks from the root, forming a simple cluster.——Leaves from the root, numerous, ascending, tapering into a flat, smooth stalk, and beset with hairs as in the last species: petals white. Perennial: flowers in July and August: grows in bogs and on wet heaths; common. *Engl. Bot.* vol. xiii. pl. 868. *Engl. Fl.* vol. ii. p. 123.

D. ánglica. Great Sun-dew. Leaves oblong, erect, on smooth stalks; flower-stalks from the root, forming a simple cluster; styles eight; capsules four-valved.——Twice the size of the last, with more slender leaves. Perennial: flowers in July and August: grows in bogs and on moist heaths, in England and Scotland. *Engl. Bot.* vol. xiii. pl. 869. *Engl. Fl.* vol. ii. p. 123.

POLYGYNIA.

94. MYOSU'RUS.

Calyx inferior, of five lance-shaped, concave, spreading, coloured, deciduous leaves; spurred at the base. Petals five, very small, tubular, and bearing honey at their base, opening obliquely inwards. Filaments five or more, linear, as long as the calyx. Anthers oblong, erect, of two linear cells. Germens very numerous, egg-shaped, on a long, tapering, erect receptacle. Styles none. Stigmas minute. Seeds oblong, acute, imbricated on the elongated, columnar, acute receptacle.

M. minimus. Common Mouse-tail.——Root small, fibrous: leaves numerous, rather fleshy, smooth, tapering into longish stalks: flower-stalks several, erect, each bearing a small pale yellow flower: germens very numerous, forming a long spike, resembling a mouse's tail. Annual: flowers in May: grows in corn-fields, meadows and pastures, in gravelly soil. *Engl. Bot.* vol. vii. pl. 485. *Engl. Fl.* vol. ii. p. 125.

Class VI. HEXANDRIA.

Plants bearing Flowers with Six Stamens.

Order I. MONOGYNIA. *One Pistil.*

* *Flowers furnished with a calyx and a corolla.*

18. **FRANKE'NIA.** *Corolla* of five petals. *Calyx* of one leaf, inferior. *Capsule* one-celled, many-seeded.
17. **BE'RBERIS.** *Corolla* of six petals. *Calyx* of six leaves, inferior. *Berry* two-seeded.
19. **PE'PLIS.** *Corolla* of six petals. *Calyx* with six deep segments and six intermediate plaits. *Capsule* two-celled.
(Lythrum hyssopifolium.)

** *Flowers destitute of calyx, superior.*

2. LEUCO'JUM. *Corolla* superior, of six petals, bell-shaped. *stamens* equal.
1. GALAN'THUS. *Corolla* superior, of six petals, three inner petals shorter, notched.
3. NARCIS'SUS. *Corolla* superior, of six petals, attached to a bell-shaped *nectary*, concealing the stamens.

*** *Flowers destitute of calyx, inferior.*

13. CONVALLA'RIA. *Corolla* inferior, six-cleft, deciduous. *Berry* three-celled. *Stigma* triangular.
9. HYACIN'THUS. *Corolla* inferior; deeply six-cleft, deciduous. *Stamens* uniform. *Capsule* three-celled. *Seeds* globular.
12. ASPA'RAGUS. *Corolla* inferior, deeply six-cleft, permanent. *Berry* three-celled. *Stigmas* three.
4. AL'LIUM. *Corolla* inferior, of six egg-shaped petals. *Stamens* awl-shaped. *Stigma* acute. *Seeds* angular.
11. NARTHE'CIUM. *Corolla* inferior, of six narrow lance-shaped petals, spreading. *Stamens* hairy.
10. ANTHE'RICUM. *Corolla* inferior, of six oblong petals. *Stamens* thread-shaped. *Stigma* obtuse. *Seeds* angular.
7. ORNITHO'GALUM. *Corolla* inferior, of six lance-shaped petals, permanent. *Stamens* dilated at the base.
8. SCIL'LA. *Corolla* inferior, of six oblong petals, spreading, deciduous. *Stamens* thread-shaped.
5. FRITILLA'RIA. *Corolla* inferior, of six petals, each with a nectar-bearing hollow at the base on the inside.
6. TULI'PA. *Corolla* inferior, of six petals, bell-shaped. *Style* none. *Seeds* flat.
14. A'CORUS. *Corolla* inferior, of six petals. *Style* none. *Seeds* egg-shaped. *Spadix* covered with numerous sessile flowers.

**** *Flowers destitute of petals.*

15. JUN'CUS. *Calyx* of six leaves. *Capsule* three-celled, six-valved. *Seeds* numerous, horizontal.
16. LU'ZULA. *Calyx* of six leaves. *Capsule* one-celled, three-valved. *Seeds* three, erect.

(Peplis portula. Polygonum.)

Order II. DIGYNIA. *Two Pistils.*

20. OXY'RIA. *Calyx* of two leaves. *Petals* two. *Seed* one, compressed, winged.

Order III. TRIGYNIA. *Three Pistils or Stigmas.*

23. SCHEUCHZE'RIA *Calyx* none. *Petals* six. *Capsules* three, inflated. *Seeds* solitary.
25. COL'CHICUM. *Calyx* none. *Corolla* of one petal, six-cleft, with a long tube. *Capsules* three, inflated. *Seeds* numerous.
24. TRI'GLOCHIN. *Calyx* three-leaved. *Petals* three. *Capsules* three-valved, opening at the base.
21. RU'MEX. *Calyx* three-leaved. *Petals* three. *Seed* one, naked, triangular.

22. TOFIEL'DIA. *Calyx* three-cleft. *Petals* six. *Capsules* three, many-seeded.

(*Elatine.*)

Order IV. POLYGYNIA. *Pistils numerous.*

26. ALIS'MA. *Calyx* of three leaves. *Petals* three. *Capsules* six or more. *Seeds* one or two.

HEXANDRIA.—MONOGYNIA.

1. GALAN'THUS.

Calyx none. Petals six, superior, deciduous; three outer oblong, concave, spreading; three inner shorter, erect, wedge-shaped, notched. Filaments hair-like, very short. Anthers oblong, with a bristly point. Germen globular, inferior. Style cylindrical, longer than the stamens. Stigma simple, acute. Capsule nearly globular, with three blunt angles, three cells, and three valves. Seeds numerous, globular.

G. nivalis. Snowdrop. Bulb egg-shaped; leaves keeled, linear, obtuse; stalk three or four inches high, round; a two-nerved membranous bractea or sheath.——Flower pendulous, with white petals, the three inner streaked with green on the inside and having a spot of the same colour on the outside. Perennial: flowers in February: grows in meadows, hedges, and woods; supposed not to be indigenous. *Engl. Bot.* vol. i. pl. 19. *Eng. Fl.* vol. i. p. 129.

2. LEUCO'JUM.

Calyx none. Petals six, regular, egg-shaped, nearly equal. Filaments short, erect, flattened. Anthers linear, four-cornered. Germen egg-shaped, inferior. Style round, blunt. Stigma acute, with a bristly point. Capsule turbinate, obtuse, three-celled, three-valved. Seeds numerous, globular.

L. æstivum. Summer Snowflake. Flowers several; style club-shaped.——About a foot and a half high: leaves linear, obtuse, with a blunt keel: stalk two-edged, hollow, bearing four or more flowers: petals uniform, each with a green spot on both sides. Perennial: flowers in May: grows in moist meadows, near rivers in England; rare. Between Greenwich and Woolwich, and in the Isle of Dogs; in an island in the river, near Kendal; at Little Stonham, Suffolk. *Engl. Bot.* vol. ix. pl. 621. *Engl. Fl.* vol. ii. p. 130.

3. NARCIS'SUS.

Calyx none. Petals six, egg-shaped, pointed, flat, attached to the outside of the tube of the nectary, above the base. Nectary of one leaf, cylindrical below, funnel-shaped above, with a coloured border. Filaments awl-shaped, attached to the tube of the nectary, short. Anthers linear. *Germen inferior,* roundish, with three blunt corners. Style thread-

shaped, triangular, longer than the stamens. Stigma three-cleft. Capsule roundish, with three blunt corners, three-celled and three-valved. Seeds numerous, globular.

N. poéticus. Poetic Narcissus. Flowers solitary; cup of the nectary very short, membranous and notched at the edge; leaves bluntly keeled, with reflected edges.——Flower pure white: the nectary edged with crimson; fragrant. Perennial: flowers in May: grows in dry open fields in England; rare. *Engl. Bot.* vol. iv. pl. 275. *Engl. Fl.* vol. ii. p. 131.

N. biflórus. Pale Narcissus. Primrose-peerless. Flowers in pairs; cup of the nectary very short, membranous and notched at the edge; leaves acutely keeled, with inflected edges.——Petals pale sulphur-yellow: border of the nectary white. Perennial: flowers in April and May: grows in sandy fields, in England; rare. *Engl. Bot.* vol. i. pl. 17. *Engl. Fl.* vol. ii. p. 132.

N. Pseúdo-Narcissus. Common Daffodil. Flowers solitary; cup of the nectary bell-shaped, erect, curled, as long as the egg-shaped petals.——Petals pale yellow: nectary deep yellow. Perennial: flowers in March. grows in woods and thickets; rare.

4. ALLIUM.

Calyx none. Petals six, inferior, oblong, regular, the three inner somewhat smaller. Filaments awl-shaped, flattened, as long as the corolla. Anthers solitary, oblong. Germen superior, turbinate, angular. Style simple, erect. Stigma acute. Capsule three-lobed, three-celled, three-valved. Seeds few, roundish, angular.

* *Stem leafy. Leaves flat.*

A. Ampeloprásum. Great Round-headed Garlick. Umbel globose, without bulbs; three alternate stamens deeply three-cleft; keel of the petals rough.——Petals uniform, pale purple, unaccompanied by bulbs. Perennial: flowers in August; Isle of Holmes in the Severn. *Engl. Bot.* vol. xxiv. pl. 1657. *Engl. Fl.* vol. ii. p. 133.

A. arenárium. Sand Garlick. Umbel globose, bearing bulbs; three alternate stamens dilated and three-cleft; keel of the petals roughish.——Flowers deep red, intermixed with dark purple bulbs. Perennial: flowers in July: grows in woods and fields in hilly districts. *Engl. Bot.* vol. xix. pl. 1358. *Engl. Fl.* vol. ii. p. 134.

A. carinátum. Mountain Garlick. Umbel loose, bearing bulbs; stamens simple, awl-shaped.——Flowers dull yellow, speckled with brown. Perennial: flowers in July: grows in dry mountainous pastures. *Engl. Bot.* vol. xxiv. pl. 1658. *Engl. Fl.* vol. i. p. 135.

** *Stem leafy. Leaves roundish.*

A. oleráceum. Streaked Field Garlick. Umbel loose, bearing bulbs; leaves semi-cylindrical, channelled above, ribbed beneath; stamens simple, awl-shaped.——Flowers reddish: bulbs numerous, purple. *Perennial: flowers* in July: grows in corn-fields and their

borders; rare. The leaves are boiled in soups. *Engl. Bot.* vol. viii. pl. 488. *Engl. Fl.* vol. ii. p. 136.

A. vineále. Crow Garlick. Umbel spherical, bearing bulbs; leaves cylindrical, smooth; three alternate stamens deeply three-cleft.——Flowers small, pale rose-coloured, with green keels: bulbs greenish. Perennial: flowers in July: grows in dry pastures, corn-fields, &c.; common. *Engl. Bot.* vol. xxviii. pl. 1974. *Engl. Fl.* vol. i. p. 137.

*** *Stalk from the root, leafless.*

A. ursínum. Broad-leaved Garlick. Ramsons. Leaves between egg-shaped and lance-shaped, stalked; scape triangular; umbel level at the top.——Leaves one or two, large, bright green: flowers pure white, with acute petals. Perennial: flowers in May and June: grows in moist woods, hedges, and meadows. *Engl. Bot.* vol. ii. pl. 122. *Engl. Fl.* vol. ii. p. 138.

A. Schœnoprásum. Chive Garlick. Leaves cylindrical, somewhat tapering at the point; scape round; umbel hemispherical.——Flowers purple, with acute petals. Perennial: flowers in June: grows in meadows and pastures; rare. Used as a pot herb. *Engl. Bot.* vol. xxxiv. pl. 2441. *Engl. Fl.* vol. i. p. 138.

5. FRITILLA'RIA.

Calyx none. Corolla inferior, bell-shaped, of six oblong petals. Nectary a cavity at the base of each petal, above. Filaments awl-shaped, shorter than the corolla. Anthers oblong, four-cornered. Germen superior, oblong, triangular. Style simple, long. Stigmas three, oblong, downy on the upper side. Capsule oblong, obtuse, three-lobed, three-celled, three-valved. Seeds very numerous, flat.

F. meleágris. Fritillary. Snake's-head. All the leaves alternate, narrow, lance-shaped, pointed; stem single-flowered.——Stem a foot high: flower terminal, pendulous, chequered with pale and dark purple: the points of the petals turned inwards. Perennial: flowers in April; grows in moist meadows, in the south of England. *Engl. Bot.* vol. ix. pl. 622. *Engl. Fl.* vol. ii. p. 139.

6. TULI'PA.

Calyx none. Corolla inferior, of six egg-shaped petals, bell-shaped. Filaments erect, flattish. Anthers oblong, four-cornered. Germen superior, oblong, large, with three blunt corners. Style none. Stigma triangular. Capsule triangular, three-valved, three-celled. Seeds numerous, egg-shaped, flat.

T. sylves'tris. Wild Tulip. Flower rather drooping; leaves lance-shaped; stamens hairy at the base.——Bulb egg-shaped: stem about a foot high, leafy at the middle: leaves alternate, lance-shaped, smooth, clasping the stem: flowers bright yellow, externally greenish. Perennial: flowers in April: grows in old chalk pits, in various parts of England. *Eng. Bot.* vol. i. pl. 63. *Engl. Fl.* vol. ii. p. 140.

7. ORNITHO'GALUM.

Calyx none. Petals six, inferior, lance-shaped, erect at first, then

spreading, permanent. Filaments erect, flattish, three of them broader at the base. Anthers oblong. Germen superior, angular. Style awl-shaped, permanent. Stigma blunt. Capsule roundish, angular, three-celled, three-valved. Seeds numerous, roundish.

O. lúteum. *Yellow Star of Bethlehem.* Stem angular, two-leaved; flower-stalks in an unbranched umbel.——Stem from four to six inches high: root-leaf narrow lance-shaped, ribbed, keeled, erect, taller than the stem: flowers yellow, tipped with green on the inner side, and nearly green on the outer. Perennial: flowers in April: grows in woods and pastures; rare. *Engl. Bot.* vol. i. pl. 21. *Engl. Fl.* vol. ii. p. 142.

O. pyrenáicum. *Tall Star of Bethlehem.* Cluster very long; filaments lance-shaped; flower-stalks equal, spreading, afterwards erect. ——Stalk two feet high: leaves all radical, linear, channelled, smooth: flowers pale yellow within, green without. Perennial: flowers in June: grows in pastures in England; rare. *Engl. Bot.* vol. vii. pl. 499. *Engl. Fl.* vol. ii. p. 143.

O. umbellátum. *Common Star of Bethlehem.* Flowers forming a corymb, the partial stalks taller than the main one; filaments dilated, entire.——Leaves radical, linear, channelled, smooth: stalk about six inches high, bearing a corymb of flowers which are white on the upper side, green on the back. Perennial: flowers in April and May: grows in meadows, pastures, and woods. *Engl. Bot.* vol. ii. pl. 130. *Engl. Fl.* vol. ii. p. 143.

8. SCILLA.

Calyx none. Petals six, inferior, oblong, spreading. Filaments all thread-shaped, simple, half as long as the petals. Anthers oblong. Germen superior, roundish. Styles simple, shorter than the stamens, deciduous. Stigma simple. Capsule roundish with three furrows, three-celled, three-valved. Seeds numerous, roundish.

S. ver'na. *Vernal Squill.* Corymb hemispherical, few-flowered; bracteas lance-shaped, obtuse; leaves linear, channelled.——Leaves numerous, deep green: flowers deep blue: stalk three or four inches high. Perennial: flowers in May and June. Isle of Man; Anglesea, Wales, Cornwall, Iona, Staffa, Caithness, Sutherland, Shetland, Orkneys, Barra. *Engl. Bot.* vol. i. pl. 23. *Engl. Fl.* vol. ii. p. 145.

S. bifólia. *Two-leaved Squill.* Cluster slightly corymbose, without bracteas; leaves lance-shaped, generally two.——Flowers from four to ten, blue. Perennial: flowers in March and April. West of England. *Engl. Bot.* vol. i. pl. 24. *Engl. Fl.* vol. ii. p. 146.

S. autumnális. *Autumnal Squill.* Cluster somewhat corymbose, without bracteas; leaves linear, numerous.——Flowers rose-coloured; stalk about three inches high. Perennial: flowers in September: grows in dry pastures, in England. *Engl. Bot.* vol. ii. pl. 78. *Engl. Fl.* vol. ii. p. 146.

S. nútans. *Harebell Squill.* *Wild Hyacinth.* Cluster drooping; flowers hanging, the points of the petals reflected; bracteas in pairs. ——Leaves numerous, pale green: stalk about a foot high: corolla

pale blue. Perennial: flowers in May: grows in thickets, woods, fields, &c.; abundant. *Engl. Bot.* vol. vi. pl. 377. *Engl. Fl.* vol. ii. p. 147.

9. HYACIN'THUS.

Calyx none. Corolla inferior, of one petal, deciduous, with a somewhat bell-shaped tube, and six-cleft reflected limb. Filaments awl-shaped, equal. Anthers oblong. Germen superior, roundish, with three corners and three grooves. Style simple, shorter than the tube, deciduous. Stigma obtuse. Capsule roundish, three-cornered, three-celled, three-valved. Seeds few, globular.

H. racemósus. Starch Hyacinth. Flowers egg-shaped, with six furrows; leaves linear, channelled, flaccid.——Leaves numerous, deep green: stalk solitary, erect, round, shorter than the leaves: flowers dark blue. Perennial: flowers in May: grows in grassy fields, or among ruins, in England; rare. *Engl. Bot.* vol. xxvii. pl. 1931. *Engl. Fl.* vol. ii. p. 149.

10. ANTHE'RICUM.

Calyx none. Petals six, inferior, oblong, spreading. Filaments thread-shaped. Anthers roundish. Germen inferior, roundish, with three angles. Style thread-shaped, erect, permanent. Stigma obtuse. Capsule roundish, three-cornered, three-celled, three-valved, crowned with the style. Seeds few, angular.

A. serotínum. Mountain Spiderwort. Leaves semi-cylindrical, those on the stem dilated at the base; flower solitary.——Flowers erect, white, veined externally with green. Perennial: flowers in June: grows on some of the highest Welsh mountains. *Engl. Bot.* vol. xii. pl. 793. *Engl. Fl.* vol. ii. p. 150.

11. NARTHE'CIUM.

Calyx none. Petals six, equal, lance-shaped, spreading, permanent. Filaments six, awl-shaped, woolly. Anthers small, oblong. Germen superior, oblong, triangular. Style conical, short. Stigma simple. Capsule oblong, pointed, bluntly triangular, three-celled, three-valved. Seeds numerous, erect, small, oblong.

N. Ossifragum. Bog Asphodel. Cluster uninterrupted; one bractea at the base, another above the middle of each partial stalk.——Six or eight inches high: leaves, sword-shaped, those on the stem much smaller: flowers yellow, green on the back. Perennial: flowers in June and July: grows on wet heaths. *Engl. Bot.* vol. viii. pl. 535. *Engl. Fl.* vol. ii. p. 151.

12. ASPA'RAGUS.

Calyx none. Corolla inferior, divided into six equal, oblong segments, permanent. Filaments thread-shaped, short. Anthers oblong, erect. Germen globular. Style very short. Stigma three-lobed. Berry globular, three-celled. Seeds one or two in each cell.

A. officinalis. Common Asparagus. Stem herbaceous, cylindrical, erect; leaves bristle-shaped, flexible; stipules solitary.——About a foot high: leaves tufted, small, bright-green: flowers axillar, two or three together, greenish-white: berry scarlet. *Engl. Bot.* vol. v. pl. 359. *Engl. Fl.* vol. ii. p. 153.

13. CONVALLA'RIA.

Calyx none. Corolla inferior, of one petal, bell-shaped, deciduous, with six obtuse segments. Filaments awl-shaped, shorter than the corolla. Anthers oblong, erect. Germen globular. Style thread-shaped, longer than the stamens. Stigma triangular, obtuse. Berry globular, three-celled. Seeds two in each cell, roundish.

C. majalis. Lily of the valley. Stalk naked, semi-cylindrical; cluster simple; flowers drooping, cup-shaped.——Leaves two, radical, elliptical, ribbed, stalked, pale green: flowers white, elegant, sweet-scented: berry scarlet. Perennial: flowers in May: grows in woods and on heaths. *Engl. Bot.* vol. xv. pl. 1035. *Engl. Fl.* vol. ii. p. 154.

C. verticillata. Narrow-leaved Solomon's Seal. Leaves narrow, lance-shaped, in whorls.——Stem erect, about two feet high, naked below, leafy above: flower-stalks axillar, solitary, each bearing from two to four pendulous white flowers: berry deep blue. Perennial: flowers in June: Den Rechip near Dunkeld, and woods near Blair-gowrie. *Engl. Bot.* vol. ii. pl. 128. *Engl. Fl.* vol. ii. p. 155.

C. polygonatum. Angular Solomon's Seal. Leaves alternate, embracing the stem; flower-stalks axillar, mostly one-flowered; stamens smooth.——Stem from twelve to eighteen inches high: flowers white, with a green line running down each segment, which is bearded at the tip: berries black. Perennial: flowers in May and June: grows in rocky mountainous woods, in England; rare. *Engl. Bot.* vol. iv. pl. 280. *Engl. Fl.* vol. ii. p. 155.

C. multiflora. Common Solomon's Seal. Leaves alternate, embracing the stem; flower-stalks axillar, many-flowered; stamens downy.——Stem two feet high: flowers from two to five on each stalk, the segments white, tipped with green: berries bluish black. Perennial: flowers in May and June: grows in woods and thickets, in England and Scotland; not common. *Engl. Bot.* vol. iv. pl. 279. *Engl. Fl.* vol. ii. p. 156.

14. A'CORUS.

Calyx none. Spadix naked, cylindrical, simple, covered with sessile flowers. Petals six, inferior, equal, obtuse, concave. Filaments thickish, erect, a little longer than the petals. Anthers thick, terminal, two-lobed. Germen superior, oblong, as long as the stamens. Style none. Stigma hemispherical. Capsule triangular, abrupt, three-celled. Seeds several, between egg-shaped and oblong.

A. Calamus. Sweet Flag. Myrtle Flag. Leafy summit of the flower-stalk rising far above the spadix.——Leaves erect, two or three feet high: stalk like the leaves, not quite so high: flowers crowded, pale green: the whole plant is aromatic, especially the root. Peren-

nial: flowers in May and June: grows on the banks of rivers, having a muddy bottom, in England. *Engl. Bot.* vol. v. pl. 356. *Engl. Fl.* vol. ii. p. 157.

15. JUN'CUS.

Calyx inferior, of six oblong, acute, permanent leaves, three of them internal. Corolla none. Filaments thread-like, short; three of them sometimes wanting. Anthers oblong, erect, two-celled. Germen superior, triangular. Style simple, cylindrical, short. Stigmas three, elongated, downy. Capsule triangular, three-celled, three-valved. Seeds numerous, minute, roundish.

* *No leaves.*

J. acútus. Great Sharp Sea Rush. Straw naked, cylindrical, sharp-pointed; panicle dense, near the summit; bractea spinous; capsule roundish, twice as long as the calyx.——Root fibrous: straws from three to six feet high, erect, straight, stiff: panicle lateral, corymbose, many-flowered: capsule broadly egg-shaped, triangular, sharp-pointed, brown. Perennial: flowers in July: grows on the sea-coast, in deep sand: Merionethshire, Norfolk, Lancashire, and Devonshire; rare. *Engl. Bot.* vol. xxiii. pl. 1614. *Engl. Fl.* vol. ii. p. 159. *Bicheno, Lin. Tr.* vol. xii. p. 297.

J. marítimus. Lesser Sharp Sea Rush. Straw naked, cylindrical, sharp-pointed; panicle loose, near the summit; bractea spinous; capsule oblong, as long as the calyx.——Root fibrous: straws about three feet high, more slender than the last: capsule prismatic. Perennial. flowers in August: grows in deep sand on the sea-coast; rare. *Engl. Bot.* vol. xxiv. pl. 1725. *Engl. Fl.* vol. ii. p. 159. *Bicheno, Lin. Tr.* vol. xii. p. 299.

J. arcticus. Arctic Rush. Straws naked, straight, acute; panicle dense, capitate, few-flowered; bractea shorter than the panicle; capsule elliptical.——Root creeping: straws about a foot high, smooth, with brown scales at the base: panicle near the top of the straw, capitate: bractea membranous: leaves of the calyx lance-shaped, bluntish, dark brown. Perennial: flowers in July and August. Discovered by Mr. Drummond on the sands of Barry, near Dundee: South Uist abundant. *Engl. Fl.* vol. ii. p. 163. *Fl. Scot.* p. 104.

J. glaucus. Hard Rush. Straw naked, straight, deeply striated; panicle erect, much branched; capsule elliptical, pointed, shorter than the calyx.——Root creeping, black: straws stiff and tough, glaucous, deeply striated, about two feet high: panicle about half way between the root and summit, cymose, nearly erect: leaves of the calyx awl-shaped, pale green, with a broad green line down the middle of the base. Perennial: flowers in July: grows in wet places, by ditches, &c. common. *Engl. Bot.* vol. x. pl. 665. *Engl. Fl.* vol. ii. p. 160. *Bicheno, Lin. Tr.* vol. xii. p. 300.

J. effúsus. Soft Rush. Straw naked, straight, faintly striated; panicle loose, repeatedly compound; capsule obtuse, a little shorter than the calyx.——Root creeping: straws soft and pliant, pale green, about two feet high: panicle very loose, about half way down the straw:

leaves of the calyx finely pointed: the pith of this and the following species is used for rush-lights: the straws are plaited into chair-bottoms and mats. Perennial: flowers in July: grows in wet meadows and pastures; common. *Engl. Bot.* vol. xii. pl. 856. *Engl. Fl.* vol. ii. p. 162. *Bicheno, Lin. Tr.* vol. xii. p. 303.

J. conglomera'tus. Common Rush. Straw naked, straight, faintly striated; panicle very dense, globular, repeatedly branched; capsule abrupt; stamens three.——Root creeping: straws soft, pliant, about two feet high: panicle forming a dense globular head of brown flowers: leaves of the calyx pointed: the straw is larger than in the last species, and the pith is consequently better for rush lights, or wicks to lamps. Perennial: flowers in July: grows in wet grounds; common. *Engl. Bot.* vol. xii. pl. 835. *Engl. Fl.* vol. ii. p. 161. *Bicheno, Lin. Tr.* vol. xii. p. 302.

J. filifórmis. Slender Rush. Straw naked, slender, drooping; panicle few-flowered, corymbose; capsule nearly globular.——Root creeping: straws very slender, pliant, pale green, about a foot high: flowers from five to eight. Perennial: flowers in August: grows on the margins of lakes, in the north of England and in Scotland; rare. *Engl. Bot.* vol. xvii. pl. 1175. *Engl. Fl.* vol. ii. p. 162. *Bicheno, Lin. Tr.* vol. xii. p. 304.

* *Plants furnished with leaves.*

J. squarro'sus. Moss Rush, Heath Rush. Straw naked; leaves radical, numerous, bristle-shaped, channelled; panicle terminal, compound; capsule inversely egg-shaped.——Root tufted: straws erect, about a foot high, bluntly triangular. Perennial: flowers in June and July: grows in wet heaths; abundantly. *Engl. Bot.* vol. xiii. pl. 933. *Engl. Fl.* vol. ii. p. 164. *Bicheno, Lin. Tr.* vol. xii. p. 306.

J. trifidus. Three-leaved Rush. Straw naked; radical leaves very few; bracteas three, leafy; a terminal head of about three flowers. ——Root creeping: straws crowded, thread-shaped, erect, from four to six inches high: radical leaves one or two, very short: bracteas three, at the top of the straw, resembling leaves. Perennial: flowers in July: grows in boggy places on the higher mountains of Scotland, as Ben Lawers, Cairn-gorm. *Engl. Bot.* vol. xxi. pl. 1482. *Engl. Fl.* vol. ii. p. 163. *Bicheno, Lin. Tr.* vol. xii. p. 314.

J. compréssus. Round Fruited-Rush. Straw simple, compressed, leafy below; leaves linear, incurved at the edges; panicle cymose, terminal, shorter than the bractea; capsule roundish, longer than the calyx.——Root creeping: straws erect, from six to twelve inches high, unbranched, round and leafy below, naked and compressed above: leaves acute, channelled. Perennial: flowers in July and August: grows in moist pastures. *Engl. Bot.* vol. xiii. pl. 934. *Engl. Fl.* vol. ii. p. 165. *Bicheno, Lin. Tr.* vol. xii. p. 307.

J. cænósus. Mud Rush. Straw simple, leafy; leaves linear, channelled; panicle cymose, terminal, longer than the bractea; capsule inversely egg-shaped, as long as the calyx.——Root creeping: straws erect, round and leafy below, triangular above. Perennial: flowers in July and August: grows in salt marshes. *Engl. Fl.* vol. ii. p. 166. *Bicheno, Lin. Tr.* vol. xii. p. 309.

J. Gesnéri. Slender-spreading Rush. Straw simple, naked; leaves linear, slightly channelled; panicle terminal, compound; leaves of the calyx lance-shaped, taper-pointed, three-ribbed, longer than the capsule. ——Root fibrous: straw erect, very slender, about a foot high: leaves very few, radical: leaves of the calyx green, three-ribbed, acute. Perennial: flowers in July: grows on the mountains of Scotland; rare. *Engl. Bot.* vol. xxxi. pl. 2174. *Engl. Fl.* vol. ii. p. 167: *J. gracilis. Bicheno, Lin. Tr.* vol. xii. p. 313. *Brit. Fl.* p. 163: *J. tenuis.*

J. bufónius. Toad Rush. Straw branched, leafy; leaves angular, channelled; panicle forked, longer than the bracteas; leaves of the calyx lance-shaped, taper-pointed, membranous, two-ribbed, longer than the capsule.——Root fibrous; straws numerous, crowded, from four inches to a foot high. Annual: flowers in July and August: grows in marshy ground, ditches, &c. common. *Engl. Bot.* vol. xii. pl. 802. *Engl. Fl.* vol. ii. p. 168. *Bicheno, Lin. Tr.* vol. xii. p. 311.

J. uliginósus. Little Bulbous Rush. Straw branched, leafy, bulbous at the base; leaves bristle-shaped, channelled: heads lateral and terminal, about three-flowered; capsule obtuse, longer than the calyx. ——Straws from two to six inches high. Perennial: flowers in June and July: grows in wet places; common. *Engl. Bot.* vol. xii. pl. 801. *Engl. Fl.* vol. ii. p. 169. *Bicheno, Lin. Tr.* vol. xii. p. 315.

J. subverticillátus. Whorl-headed Rush. Straw leafy, decumbent; leaves bristle-shaped, channelled, slightly jointed; panicle forked; heads lateral and terminal, somewhat whorled; capsule obtuse, rather longer than the calyx.——Root fibrous: stems crowded, decumbent or floating, from six inches to a foot long. Perennial: flowers in July and August: grows in watery places; common. *Engl. Fl.* vol. i. p. 170. *Bicheno, Lin. Tr.* vol. xii. p. 222.

J. capitátus. Dense-headed Rush. Straw erect, simple, leafy at the base; leaves bristle-shaped, channelled; heads lateral and terminal; leaves of the calyx keeled, bristle-pointed, twice as long as the capsule; stamens three.——Root fibrous: straws from two to four inches high. Annual: flowers in the summer months: grows in sandy ground, in the island of Jersey. *Engl. Fl.* vol. ii. pl. 170: *J. supinus. Bicheno, Lin. Tr.* vol. xii. p. 317.

J. biglúmis. Two-flowered Rush. Straw erect, simple, leafy at the base; leaves flat; head solitary, of two flowers, overtopped by a leafy bractea.——Root fibrous: straws from two to four inches high: flowers terminal: capsule longer than the calyx. Perennial: flowers in August: grows on the higher mountains of Scotland. *Engl. Bot.* vol. xiii. pl. 898. *Engl. Fl.* vol. ii. p. 172. *Bicheno, Lin. Tr.* vol. xii. p. 320.

J. triglúmis. Three-flowered Rush. Straw erect, simple, leafy below; leaves flat; head solitary, terminal, of three flowers, with elliptical bracteas.——Roots creeping: straws from three to six inches high. Perennial: flowers in July: grows on the higher mountains of Wales, the north of England, and Scotland. *Engl. Bot.* vol. xiii. pl. 899. *Engl. Fl.* vol. ii. p. 173. *Bicheno, Lin. Tr.* vol. xii. p. 319.

J. castáneus. Clustered Alpine Rush. Straw simple, leafy; leaves flat, keeled; heads terminal, mostly in pairs, many-flowered, with

leafy bracteas; capsule twice as long as the calyx.——Root creeping: straws solitary, erect, from eight to twelve inches high. Perennial: flowers in July: grows in the Highlands of Scotland, and in the north of England. *Engl. Bot.* vol. xiii. pl. 900. *Engl. Fl.* vol. ii. p. 174. *Bicheno, Lin. Tr.* vol. xii. p. 321.

J. acutiflórus. Sharp-flowered Rush. Leaves apparently jointed, somewhat compressed; panicle repeatedly compound, terminal; leaves of the calyx lance-shaped, nearly as long as the narrow egg-shaped, taper-pointed capsule.——From one to two feet high: flowers greenish-brown. Perennial: flowers in July and August: grows in bogs, ditches, &c.; very common. *Engl. Bot.* vol. xxx. pl. 2143. *Engl. Fl.* vol. ii. p. 174. *Bicheno, Lin. Tr.* vol. xii. p. 323.

J. lampocar'pus. Shining-fruited Rush. Leaves apparently jointed, compressed; panicle repeatedly compound, terminal, erect; three inner leaves of the calyx rather blunt; capsule egg-shaped, acute, longer than the calyx, shining.——From one to two feet high: perennial: flowers in July and August: grows in bogs and ditches; common. *Engl. Bot.* vol. xxx. pl. 2143. *Engl. Fl.* vol. ii. p. 175. *Bicheno, Lin. Tr.* vol. xii. p. 325.

J. obtusiflórus. Blunt-flowered Rush. Leaves apparently jointed, cylindrical; panicle very much compounded, spreading; leaves of the calyx very obtuse, as long as the capsule.——Straws with internal partitions, about two feet high. Perennial: grows in marshy places; not common. *Engl. Bot.* vol. xxx. pl. 2144. *Engl. Fl.* vol. ii. p. 176. *Bicheno, Lin. Tr.* vol. xii. p. 327.

J. polycéphalus. Many-headed jointed Rush. Leaves apparently jointed, cylindrical; panicle twice or thrice forked, erect; heads many-flowered; leaves of the calyx lance-shaped, acute, rather shorter than the capsule.——Ramifications of the panicle simple. Perennial: found in the Highlands of Scotland, by Mr. G. Don. *Engl. Fl.* vol. ii. p. 177. *Fl. Scot.* p. 109.

16. LU'ZULA.

Calyx inferior, of six oblong, acute, permanent leaves, three of them internal. Corolla none. Filaments thread-like, short. Anthers oblong, erect, two-celled. Germen superior, triangular. Style simple, thread-shaped, short. Stigmas three, tapering, downy. Capsule triangular, one-celled, three-valved. Seeds three, at the bottom of the capsule.

L. pilósa. Broad-leaved Hairy Wood Rush. Panicle cymose, widely spreading; flowers solitary; capsule pointless; leaves of the calyx long-pointed, shorter than the capsule.——Straw about a foot high: leaves between linear and lance-shaped, ribbed, fringed with long, white hairs. Perennial: flowers in April and May: grows in woods and thickets; common. *Engl. Bot.* vol. xi. pl. 736. *Engl. Fl.* vol. ii. p. 178. *Bicheno, Lin. Tr.* vol. xii. p. 329.

L. Forstéri. Narrow-leaved Hairy Wood Rush. Panicle cymose, erect; flowers solitary; capsule pointed; leaves of the calyx long-pointed, a little longer than the capsule.——More slender than the last, and the leaves much narrower. Perennial: flowers in April and

May: grows in woods and thickets. *Engl. Fl.* vol. ii. p. 179. *Engl. Bot.* vol. xviii. pl. 1293. *Bicheno, Lin. Tr.* vol. xii. p. 381.

L. sylvática. Great Wood Rush. Panicle cymose, doubly compound; flowers aggregate; capsule pointed; leaves of the calyx awned, as long as the capsule.——From two to three feet high: leaves broad, hairy on the edges, the root-leaves forming a large tuft. Perennial: flowers in May: grows in woods and shady places; common. *Engl. Bot.* vol. xi. pl. 737. *Engl. Fl.* vol. ii. p. 180. *Bicheno, Lin. Tr.* vol. xi. p. 331.

L. compes'tris. Field Rush. Panicle of three or four egg-shaped, dense clusters; capsule inversely egg-shaped, obtuse, with a small point; leaves of the calyx long-pointed, longer than the capsule.——Root scaly, creeping, tufted: straws from three to ten inches high, simple, straight: leaves dark-green, very hairy at the margin: leaves of the calyx lance-shaped, pointed, dark-brown. Perennial: flowers in April and May: grows in dry pastures; frequent. *Engl. Bot.* vol. x. pl. 672. *Engl. Fl.* vol. ii. p. 181. *Bicheno, Lin. Tr.* vol. xii. p. 334.

L. conges'ta. Many-headed Bog Wood Rush. Panicle of numerous, egg-shaped, dense clusters; capsule inversely egg-shaped, obtuse, with a small point, as long as the calyx.——Straws erect, from twelve to eighteen inches high: leaves much narrower than in the last, hairy at the margin: leaves of the calyx paler and more taper-pointed. Perennial: flowers in June: grows in marshy ground. *Engl. Fl.* vol. ii. p. 181.

L. spicáta. Spiked Wood Rush. Panicle compound, dense, oblong, drooping; capsule elliptical, with a small point; leaves of the calyx between taper-pointed and awned, as long as the capsule.——From six to eight inches high: leaves small, somewhat channelled, hairy at the margins of the sheaths. Perennial: flowers in July: grows on the higher mountains of Scotland and Westmoreland. *Engl. Bot.* vol. xvii. pl. 1176. *Engl. Fl.* vol. ii. p. 182. *Bicheno, Lin. Tr.* vol. xii. p. 337.

L. arcuáta. Curved Mountain Wood Rush. Panicle somewhat umbellate, partly compound, with drooping branches; capsule elliptical, shorter than the lance-shaped, acute leaves of the calyx.——Straw three or four inches high: root-leaves numerous, linear, channelled, slightly hairy: stem-leaves flatter. Perennial: flowers in July: grows on the higher mountains of Scotland. *Engl. Fl.* vol. ii. p. 183.

17. BER'BERIS.

Calyx inferior, of six, inversely egg-shaped, spreading, coloured leaves, the three outer smaller. Petals six, roundish, spreading, the claw of each having two oblong nectariferous glands. Filaments linear, flattened. Anthers of two separate lobes, on the opposite edges of the top of the filament. Germen superior, oblong. Stigma round, broader than the germen, permanent. Berry oblong, one-celled, pulpy. Seeds two or three, oblong, cylindrical.

B. vulgáris. Common Barberry. Clusters pendulous; thorns three-cleft; leaves inversely egg-shaped, with bristly serratures.——A bushy shrub three or four feet high: flowers bright yellow: the stamens on being irritated, contract, and thus throw the pollen upon the stigma:

berries scarlet, very acid, when boiled with sugar forming a very agreeable jelly. This plant is said to be prejudicial to growing corn, causing barrenness in the ears. *Eng. Bot.* pl. 49. *Engl. Fl.* vol. ii. p. 184.

18. FRANKE'NIA.

Calyx inferior, of one leaf, nearly cylindrical, five-cornered, permanent; the border with five acute teeth. Petals five, the claws as long as the calyx, the limbs inversely egg-shaped, spreading. Nectary a channelled membrane, on the inner side of each claw. Filaments six, as long as the calyx. Anthers of two roundish lobes. Germen superior, egg-shaped, with three furrows. Style erect, cylindrical, as long as the stamens. Stigmas three, oblong, erect. Capsule oval, one-celled, three-valved. Seeds numerous, egg-shaped, minute.

F. lævis. Smooth Sea-heath. Leaves linear, crowded, fringed at the base.——Root woody: stems prostrate, branched, slightly downy. flowers from the forks of the stem, sessile, solitary, flesh-coloured. Perennial: flowers in July: grows in salt marshes on the coasts of England. *Engl. Bot.* vol. iii. pl. 205. *Engl. Fl.* vol. ii. p. 186.

F. pulverulénta. Powdery Sea-heath. Leaves inversely egg-shaped, abrupt, downy and somewhat powdery beneath.——Root fibrous: Stems prostrate, branched, downy: flowers chiefly from the forks of the stem, pale-red. Annual: flowers in July: grows on the sea-coast of Sussex; very rare. *Engl. Bot.* vol. xxxi. pl. 2222. *Engl. Fl.* vol. i. p. 186.

19. PEPLIS.

Calyx inferior, of one leaf, bell-shaped, large, permanent, with six acute segments, and six intermediate plaits. Petals six, very minute, egg-shaped, from the mouth of the calyx. Filaments thread-shaped, incurved, short. Anthers roundish. Germen egg-shaped. Style cylindrical, very short. Stigma round and flat. Capsule globose, two-celled, with a transverse partition. Seeds numerous, minute, triangular.

P. Pórtula. Water Purslane. Petals generally wanting; leaves opposite, inversely egg-shaped, stalked.——Stems numerous, creeping: flowers small, axillar, solitary, reddish. Annual: flowers in July and August: grows in watery places, especially such as become dry in summer. *Engl. Bot.* vol. xvii. pl. 1121. *Engl. Fl.* vol. ii. p. 187.

DIGYNIA.

20 OXY'RIA.

Calyx inferior, of two opposite, lance-shaped, permanent leaves. Petals two, inversely egg-shaped, erect, permanent. Filaments awl-shaped, shorter than the calyx. Anthers erect, two-lobed. Germen superior, egg-shaped, compressed, with membranous edges, cleft. Styles very short, erect. Stigmas in many tufted segments. Seed one, egg-shaped, compressed, with a dilated, membranous wing.

O. reniformis. Kidney-leaved Mountain Sorrel. Stem from six inches to a foot high, almost leafless: leaves almost all radical, numerous, kidney-shaped: panicle erect, branched: flowers small, drooping. Perennial: flowers in June: grows on moist rocks and by rills, on the higher mountains of Scotland and the north of England; abundant. *Engl. Bot.* vol. xiii. pl. 910. *Engl. Fl.* vol. ii. p. 188. *Fl. Scot.* p. 111.

TRIGYNIA.

21 RU'MEX.

Calyx inferior, of three obtuse, permanent leaves. Petals three, larger than the calyx, and similar in colour, but thinner and more veiny, permanent, ultimately enlarged and converging round the seed. Filaments thread-shaped, very short. Anthers erect, oblong, two-lobed. Germen superior, triangular. Styles thread-shaped, spreading, standing out between the petals. Stigma large, in many tufted segments. Seed single, triangular, polished.

* *Flowers all perfect.*

R. sanguineus. Bloody-veined Dock. Enlarged petals entire, oblong, one at least bearing a tubercle: leaves lance-shaped, somewhat heart-shaped.——Stem two or three feet high, erect, branched, leafy, reddish. Leaves all stalked, slightly curled at the edges. Perennial: flowers in July: grows in woods and waste-places. *Engl. Bot.* vol. xxii. pl. 1533. *Engl. Fl.* vol. ii. p. 190.

R. crispus. Curled Dock. Enlarged petals entire, egg-shaped, all bearing a tubercle; leaves lance-shaped, wavy, acute.——Stem two or three feet high, erect, panicled, leafy: clusters of numerous tufts or whorls, of drooping flowers. A very troublesome weed. Perennial: flowers in July: grows in pastures, waste places, &c.; common. *Engl. Bot.* vol. xxviii. pl. 1998. *Engl. Fl.* vol. ii. p. 191.

R. acutus. Sharp-leaved Dock. Enlarged petals oblong, obscurely toothed, all bearing a tubercle; leaves between oblong and heart-shaped, pointed; clusters leafy.——Stem about two feet high, angular, furrowed, leafy, alternately branched: leaves stalked: branches loose, bearing numerous distant whorls of flowers. Perennial: flowers in July: grows in watery places; not uncommon. *Engl. Bot.* vol. xi. pl. 724. *Engl. Fl.* vol. ii. p. 192.

R. pulcher. Fiddle Dock. Enlarged petals toothed, one principally bearing a tubercle; root-leaves fiddle-shaped; stem smooth, spreading.——Stems often procumbent: root-leaves on long stalks: stem-leaves numerous, alternate, lance-shaped: whorls of flowers numerous. Perennial: flowers in August: grows in dry pastures, by road-sides, among rubbish, &c. *Engl. Bot.* vol. xx. pl. 1576. *Engl. Fl.* vol. ii. p. 193.

R. maritimus. Golden Dock. Enlarged petals triangular, fringed with slender teeth, bearing a tubercle; leaves linear; whorls crowded. ——Stem from one to two feet high, angular, furrowed, leafy: leaves stalked: flowers very numerous, in dense leafy whorls. Whole plant

ultimately assuming a golden colour. Perennial: flowers in July and August: grows in marshes, principally near the sea. *Engl. Bot.* vol. xi. pl. 725. *Engl. Fl.* vol. ii. p. 194.

R. palustris. Yellow marsh Dock. Enlarged petals lance-shaped, toothed at the base, bearing a tubercle; leaves between linear and lance-shaped; whorls distant.——Stem two feet high, nearly erect, branched, furrowed, leafy: leaves stalked: flowers in distant whorls. Perennial: flowers in July and August: grows in marshes, ditches, and boggy grounds. *Engl. Bot.* vol. xxvii. pl. 1932. *Engl. Fl.* vol. ii. p. 113.

R. obtusifólius. Broad-leaved Dock. Enlarged petals toothed, one principally bearing a tubercle; root-leaves heart-shaped, obtuse; stem roughish.——Stems about three feet high, erect, branched, furrowed, leafy: root-leaves very large, the others more narrow, all notched and curled more or less at the edge. A troublesome weed. Perennial: flowers in July and August: grows about houses, in waste places and fields. *Engl. Bot.* vol. xxviii. pl. 1999. *Engl. Fl.* vol. ii. p. 192.

R. Hydrolápathum. Great Water Dock. Enlarged petals egg-shaped, nearly entire, unequally tubercled; leaves lance-shaped, acute at both ends; whorls rather crowded, almost leafless.——Stem from four to six feet high, erect, hollow, furrowed, branched, leafy: leaves stalked, leathery, the tubercles on the petals vary in size and shape. Perennial: flowers in July and August: grows in ditches and by rivers. The root is highly astringent. *Engl. Bot.* vol. xxx. pl. 2104. *Engl. Fl.* vol. ii. p. 195.

** *Stameniferous flowers and pistilliferous flowers, on separate plants.*

R. Acetósa. Common Sorrel. Enlarged petals bearing tubercles; leaves oblong, arrow-shaped.——Stem from one to two feet high, erect, hollow, striated, leafy. The whole plant is powerfully acid, and the leaves are eaten as salad. Perennial: flowers in the summer months: grows in pastures, cultivated fields, and by roads and hedges; abundant. *Engl. Bot.* vol. ii. pl. 127. *Engl. Fl.* vol. ii. p. 196.

R. Acetosella. Sheep's Sorrel. Enlarged petals destitute of tubercles; leaves halbert-shaped.——Stem from four inches to a foot high, erect, leafy. the whole plant is powerfully acid, but less juicy than the preceding. Perennial: flowers in the summer months: grows in pastures, cultivated fields, and waste places; common. *Engl. Bot.* vol. xxiv. pl. 1674. *Engl. Fl.* vol. ii. p. 197.

22. TOFIEL'DIA.

Calyx inferior, small, of one leaf, three cleft, permanent. Petals six, oblong, equal, permanent, many times longer than the calyx. Filaments awl-shaped, simple, as long as the corolla. Anthers heart-shaped, fixed sidewise. Germen three-cornered. Styles awl-shaped, spreading. Stigmas knobbed. Capsules three, connected at the base, each one-celled, two-valved. Seeds numerous, oblong, angular.

T. palústris. Scottish Asphodel. Flowers in an egg-shaped head; stem thread-shaped, smooth, leafless; petals inversely egg-shaped;

germens roundish.——Leaves sword-shaped, in two-rowed tufts: stem four or five inches high: flowers greenish-white. Perennial: flowers in August: grows in boggy places, on the mountains of Scotland and the north of England. *Eng. Bot.* vol. viii. pl. 536. *Engl. Fl.* vol. ii. p. 198.

23. SCHEUCHZE'RIA.

Calyx none. Petals six, inferior, oblong, acute, recurved, permanent. Filaments thread-shaped, shorter than the petals. Anthers terminal, linear, two-celled. Germens three, superior, egg-shaped, compressed. Styles none. Stigmas oblong, obtuse. Capsules three, roundish, compressed, pointed, each one-celled, two-valved. Seeds solitary, oblong.

S. palústris. Marsh Scheuchzeria. Root long, creeping. Stems erect, simple, wavy, six inches high: leaves few, alternate, semi-cylindrical, obtuse: flowers about five, in a terminal cluster. Perennial: flowers in June: grows in wet spongy mountain bogs; very rare, having been found only in Lakeby Car, Yorkshire.

24. TRIGLO'CHIN.

Calyx inferior, of three roundish, deciduous leaves. Petals three, egg-shaped, a little longer than the calyx. Filaments very short. Anthers large, roundish, two-lobed. Germen superior, large, oblong. Styles none. Stigmas three or six, reflected, feathery. Capsule oblong, with as many cells as there are stigmas. Seeds solitary, oblong, pointed.

T. palústre. Marsh Arrow-grass. Capsule three-celled, nearly linear.——Root fibrous: leaves all radical, linear, channelled, smooth, nearly erect: flowers in a long terminal spike, reddish-green. Perennial: flowers in June and July: grows in wet meadows. Cattle are fond of it. *Engl. Bot.* vol. vi. pl. 366. *Engl. Fl.* vol. ii. p. 200.

T. marítimum. Sea Arrow-grass. Capsule six-celled, egg-shaped.——Leaves radical, semi-cylindrical. Larger than the last. It has a salt taste, and cattle, especially cows, are fond of it. Perennial: flowers in June and July: grows in salt marshes, and pastures overflowed by the tide. *Engl. Bot.* vol. iv. pl. 255. *Engl. Fl.* vol. ii. p. 201.

25. COL'CHICUM.

Calyx none. Corolla of one petal; tube angular, arising from the root; limb divided into six oblong, erect segments. Filaments awl-shaped, shorter than the corolla. Anthers oblong, two-celled, four-valved. Germen imbedded in the root, roundish. Styles three, thread-shaped, as long as the stamens. Stigmas linear, recurved, channelled, downy. Capsules three, superior, stalked, oblong, each one-celled. Seeds numerous, round.

C. autumnále. Bulb egg-shaped, large.——In spring several narrow leaves arise, but the flower does not appear until September. The

ermen lies buried in the root all winter, and is raised in spring, to erfect its seeds through the summer. Flower pale purple. Perennial. rows in moist meadows; rare. The roots have a good deal of acri- ony. An infusion of them in vinegar, formed into a syrup by the ddition of sugar or honey, is said to be a good expectorant and iuretic. *Engl. Bot.* vol. ii. pl. 133. *Engl. Fl.* vol. ii. p. 202.

POLYGYNIA.

26. ALIS'MA.

Calyx inferior, of three egg-shaped, permanent leaves. Petals hree, roundish, much larger than the calyx, deciduous. Filaments wl-shaped, short. Anthers roundish. Germens superior, more than ve. Styles simple. Stigmas blunt. Capsules more than five, com- ressed. Seeds small, solitary.

A Plantâgo. Great Water Plantain. Leaves egg-shaped, acute; apsules obtusely triangular.——Root fibrous: leaves all radical, on ng stalks, erect: flower-stalk several feet high, panicled: flowers rminal, solitary, pale, purplish. Perennial: flowers in July: grows i ditches, pools, lakes and rivers; common. *Engl. Bot.* vol. xii. pl. 37. *Engl. Fl.* vol. ii. p. 203.

A. Damasónium. Star-headed Water Plantain. Leaves oblong, eart-shaped at the base; capsules awl-shaped; styles six.——Root brous: leaves all radical, floating: flower-stalks about six inches igh, bearing one or two whorls of white flowers. Perennial: flowers n June and July: grows in ditches and pools; not common. *Engl. Bot.* vol. xxiii. pl. 1615. *Engl. Fl.* vol. ii. p. 204.

A. nâtans. Floating Water Plantain. Leaves elliptical, obtuse; apsules striated; flower-stalks simple.——Stems floating, thread- haped, from three to ten feet long. Flower-stalks from the joints of he stem, erect, single-flowered. Petals large, white, with a yellow pot near the claw. Perennial: flowers in July and August: grows n the lakes of North Wales and Cumberland. *Engl. Bot.* vol. xi. pl. 75. *Engl. Fl.* vol. ii. p. 204.

A. ranunculoides. Lesser Water Plantain. Leaves between linear nd lance-shaped; capsules angular, acute, numerous, in a globular ead; stem none.——Root fibrous: leaves all radical, erect, on long talks: flower-stalks radical, erect, from three to ten inches high, with one or two whorls of pale purplish flowers. Perennial: flowers in August: grows in ditches and bogs; not common. *Engl. Bot.* vol. v. pl. 326. *Engl. Fl.* vol. ii. p. 205.

Class VII. HEPTANDRIA.

Plants bearing Flowers with Seven Stamens.

Order I. MONOGYNIA. *One Pistil.*

1. TRIENTA'LIS. *Calyx* of seven leaves. *Corolla* deeply divided into seven segments. *Capsule* seven-valved.

HEPTANDRIA.—MONOGYNIA.

1. TRIENTA'LIS.

Calyx inferior, of seven linear, acute, spreading, permanent leaves. Corolla of one petal, wheel-shaped, deeply divided into seven elliptical, flat, spreading segments. Filaments thread-shaped, spreading, shorter than the corolla. Anthers oblong, recurved. Germen superior, round. Style cylindrical, as long as the stamens. Stigma obtuse. Capsule globose, one-celled, seven-valved. Seeds few, roundish, tunicated.

T. europæa. European Chickweed Winter-green. Leaves oblong; stem solitary, simple, erect, from three to six inches high, crowned with a tuft of leaves.——Flower-stalks from among the leaves, hair-shaped, simple: flowers white. Perennial: flowers in June and July: grows in woods and on dry heaths, in Scotland and the north of England. *Engl. Bot.* vol. i. pl. 15. *Engl. Fl.* vol. ii. p. 208.

Class VIII. OCTANDRIA.

Plants bearing Flowers with Eight Stamens.

Order I. MONOGYNIA. *One Pistil.*

* *Flowers having both calyx and corolla.*

9. A'CER. *Petals* five. *Calyx* five-cleft, inferior. *Capsule* winged.
2. EPILO'BIUM. *Petals* four. *Calyx* four-cleft, superior. *Capsule* four-celled. *Seeds* bearded.
1. ŒNOTHE'RA. *Petals* four. *Calyx* four-cleft, superior. *Capsule* four-celled. *Seeds* beardless.
3. CHLO'RA. *Corolla* deeply divided into eight or six segments. *Calyx* of eight or six leaves, inferior. *Capsule* one-celled.
4. VACCI'NIUM. *Corolla* of one petal. *Calyx* four-cleft. *Berry* inferior.
5. MENZIE'SIA. *Corolla* of one petal. *Calyx* of one leaf. *Capsule* superior; partitions double, from the margin of the valves.
7. ERI'CA. *Corolla* of one petal. *Calyx* of four leaves. *Capsule* superior; partitions simple, from the centre of the valves.
6. CALLU'NA. *Corolla* of one petal. *Calyx* double, each four-leaved. *Capsule* superior; partitions from the column, alternate with the valves and unconnected with them.

(Monotropa.)

** *Flowers destitute of corolla.*

8. DAPHNE. *Calyx* four-cleft, coloured, inferior. *Berry* one-seeded.

Order II. DIGYNIA. *Two Pistils.*

(Polygonum. Chrysosplenium. Scleranthus.)

Order III. TRIGYNIA. *Three Pistils.*

10. POLY'GONUM. *Calyx* divided into five deep segments, coloured, inferior. *Corolla* none. *Seed* one, naked.

Order IV. TETRAGYNIA. *Four Pistils.*

2. ADO'XA. *Calyx* half-inferior. *Corolla* divided into four or five segments. *Berry* four or five-celled.

1. PA'RIS. *Calyx* four-leaved. *Petals* four, awl-shaped. *Berry* four-celled.

3. ELATI'NE. *Calyx* four-leaved. *Petals* four. *Capsule* superior, four-celled.

(Sagina. Rhodiola.)

OCTANDRIA.—MONOGYNIA.

1. ŒNOTHE'RA.

Calyx superior, of one leaf, deciduous; tube cylindrical, limb deeply divided into four oblong segments. Petals four, inversely heart-shaped, attached to the summit of the tube of the calyx, and as long as the limb. Filaments awl-shaped, incurved, shorter than the petals. Anthers oblong. Germen inferior, oblong, furrowed. Stigma divided into four obtuse, spreading segments. Capsule oblong, bluntly quadrangular, four-celled, four-valved. Seeds numerous, angular, cardless.

Œ. biennis. Common Evening Primrose. Leaves between egg-shaped and lance-shaped, flat; stem rough, somewhat hairy; petals undivided.——Stem two or three feet high, leafy, angular: leaves alternate, acute, toothed, downy: flowers numerous, bright yellow, in terminal spikes. Biennial: flowers in July, August, and September: grows on sand banks, on the west coast of England; an American species naturalised. *Engl. Bot.* vol. xxi. pl. 1534. *Engl. Fl.* vol. ii. p. 211.

2. EPILO'BIUM.

Calyx superior, of one leaf, deeply divided into four oblong, coloured, deciduous segments. Petals four, circular, broadest at the outer part, notched, inserted between the segments of the calyx. Filaments awl-shaped, four alternate ones shorter. Anthers oval, compressed, obtuse. Germen inferior, cylindrical, very long. Style thread-shaped. Stigma thick, blunt, generally four-cleft. Capsule

quadrangular, very long, four-celled, four-valved; partitions opposite the valves. Seeds numerous, oblong, small, crowned with down.

* *Flowers irregular.*

E. angustifólium. Rose-bay Willow-herb. Leaves scattered, between linear and lance-shaped, veined, smooth; petals unequal; stamens declining.——Stems from three to six feet high: flowers rose-coloured, numerous, in long, terminal, erect clusters. Perennial: flowers in July and August: grows in moist meadows and shady places; not common. *Engl. Bot.* vol. xxviii. pl. 1947. *Engl. Fl.* vol. ii. p. 212.

** *Flowers regular. Stigma deeply four-cleft.*

E. hirsútum. Great Hairy Willow-herb. Codlings and Cream. Leaves between egg-shaped and spear-shaped, half embracing the stem, hairy; stem very much branched; root creeping.——Stems about four feet high: flowers in leafy clusters, large, of a fine rose-colour: the top shoots have a delicate fragrance resembling that of scalded codlings. Perennial: flowers in July: grows in watery places, ditches, banks of rivers and lakes; common. *Engl. Bot.* vol. xii. pl. 838. *Engl. Fl.* vol. ii. p. 213.

E. parviflórum. Small-flowered Hoary Willow-herb. Leaves lance-shaped, sessile, downy; stem little branched, woolly; root fibrous.—— Stem about two feet high: flowers small, pale rose-colour. Perennial: flowers in July: grows in watery places, ditches, &c.; very common. *Engl. Bot.* vol. xii. pl. 795. *Engl. Fl.* vol. ii. p. 214.

E. montánum. Broad Smooth-leaved Willow-herb. Leaves egg-shaped, toothed, opposite; stem round; stigma in four deep segments. ——Stem from one to two feet high, erect: lower leaves opposite, upper alternate: flowers light purple, not numerous. Perennial: flowers in July: grows in dry shady places; common. *Engl. Bot.* vol. xvii. pl. 1177. *Engl. Fl.* vol. ii. p. 214.

*** *Flowers regular. Stigma undivided.*

E. róseum. Pale Smooth-leaved Willow-herb. Leaves egg-shaped, toothed, opposite; stem obscurely four-cornered; stigma undivided. ——Leaves smooth, thin and delicate: flowers light purple. Perennial: flowers in July: grows in waste boggy grounds or watery places; rare. *Engl. Bot.* vol. x. pl. 693. *Engl. Fl.* vol. ii. p. 215.

E. tetrágonum. Square-stalked Willow-herb. Leaves lance-shaped, sessile, minutely toothed; stem four-cornered; stigma undivided.—— Stem from twelve to eighteen inches high: flowers pale purple, few, in leafy clusters. Perennial: flowers in July: grows in marshes, and by the sides of ditches and rivulets; common. *Engl. Bot.* vol. xviii. pl. 1948.

E. palustre. Round-stalked Marsh Willow-herb. Leaves narrow, lance-shaped, sessile, slightly toothed; stem round; stigma undivided. ——Stem from six to eighteen inches high: flowers pale purple, in leafy clusters. Perennial: flowers in July: grows in marshes, and by the sides of ditches and rivulets. *Eng. Bot.* vol. v. pl. 346. *Engl. Fl.* vol. ii. p. 216.

E. alsinifólium. Chickweed-leaved Willow-herb. Leaves egg-shaped, acute, toothed, stalked; stem decumbent at the base, bluntly four-cornered; root creeping.——Stems about six inches long: flowers rose-coloured. Perennial: flowers in June and July: grows on the edges of mountain rills, in the north of England, and in the Highlands of Scotland. *Engl. Bot.* vol. xxviii. pl. 2000. *Engl. Fl.* vol. ii. p. 216. *Fl. Scot.* p. 117.

E. alpínum. Alpine Willow-herb. Leaves elliptical, obtuse, nearly entire, on short stalks; stem decumbent, two or three-flowered; root creeping.——Stems three or four inches long: flowers generally two, rose-coloured. Perennial: flowers in June and July: grows on the edges of rills on all the Highland mountains.—*Engl. Bot.* vol. xxviii. pl. 2001. *Engl. Fl.* vol. ii. p. 217.

3. CHLO'RA.

Calyx inferior, of eight linear, spreading, permanent leaves. Corolla of one petal, salver-shaped; the tubes shorter than the calyx; the limb with eight elliptical segments, longer than the tube. Filaments thread-shaped, short. Anthers linear, erect. Germen superior, oblong. Style cylindrical, erect. Stigmas two, oblong, cleft. Capsule egg-shaped, one-celled, two-valved. Seeds very numerous, angular.

C. perfoliáta. Perfoliate Yellow-wort. Leaves egg-shaped, opposite, united; panicle many forked, many-flowered.——Stem about a foot high, erect, round, panicled: flowers numerous, bright yellow. Annual: flowers in July and August: grows on clayey or marly grounds. *Engl. Bot.* vol. i. pl. 60. *Engl. Fl.* vol. ii. p. 218.

4. VACCI'NIUM.

Calyx superior, very small, permanent, four-toothed. Corolla of one petal, bell-shaped, with four revolute segments. Filaments awl-shaped, flattened, fixed to the receptacle. Anthers oblong, with two points, erect, terminal. Germen inferior, roundish. Style simple, cylindrical, erect, longer than the stamens. Stigma obtuse. Berry globular, with a central depression, four-celled. Seeds few, small.

* *Leaves deciduous.*

V. Myrtil'lus. Bilbery. Blaeberry. Black Whortle-berry. Flower-stalks solitary, one-flowered; leaves egg-shaped, serrated, smooth; stem and branches acutely angular.——Stem bushy, from one to two feet high, smooth, green: leaves stalked, thin, deciduous: corolla pale reddish-purple: berry bluish-black. The berries are agreeable and wholesome, but stain the lips and fingers of a dark purple colour: they are eaten by grouse and other birds. A shrub: flowers in May: grows on heaths and hilly ground. *Engl. Bot.* vol. vii. pl. 456. *Engl. Fl.* vol. ii. p. 219.

V. uliginósum. Great Bilberry. Bog Whortle-berry. Flower-stalks one-flowered; leaves inversely egg-shaped, entire, smooth; branches round.——About two feet high: corolla flesh-coloured: berry large, bluish-black. A shrub: flowers in May: grows on boggy moun-

tainous heaths, in the north of England and in Scotland. *Engl. Bot.* vol. ix. pl. 581. *Engl. Fl.* vol. ii. p. 219.

** *Leaves evergreen.*

V. Vitis-idæa. *Red Whortle-berry.* *Cow-berry.* Clusters terminal, drooping; leaves inversely egg-shaped, revolute, minutely toothed, dotted beneath; corolla bell-shaped.——Stems from three to six inches high: flowers flesh-coloured: berry deep red. The berries are very acid and rather harsh, but are made into jelly and rob. A shrub: flowers in June: grows on dry heaths. *Engl. Bot.* vol. ix. pl. 598. *Engl. Fl.* vol. ii. p. 220.

V. Oxycoccos. *Marsh Whortle-berry.* *Cran-berry.* Flowers terminal; leaves egg-shaped, entire, revolute, acute; stems creeping, thread-shaped, smooth; corolla deeply four-cleft.——Stems slender, prostrate: flowers several together, pale red: berry deep red. The berries made into tarts are much esteemed. A shrub: flowers in June: grows in boggy heaths. *Engl. Bot.* vol. v. pl. 319. *Engl. Fl.* vol. ii. p. 221.

5. MENZIE'SIA.

Calyx inferior, of one leaf, four-cleft or five-cleft, permanent. Corolla of one petal, inflated, deciduous; limb divided into four or five spreading segments. Filaments eight or ten, thread-shaped, shorter than the corolla. Anthers oblong, cleft at the base. Germen superior, roundish. Style angular, erect. Stigma obtuse, with four or five notches. Capsule oblong, with four or five valves and cells; partitions double, formed by the inflected edges of the valves. Seeds numerous, small, oblong.

M. cærúlea. *Scottish Menziesia.* Leaves linear, obtuse, with cartilaginous teeth; flowers five-cleft, decandrous.——Stem four or five inches high, decumbent below, leafy above: flowers four or five at the top of the highest branch, drooping: corolla pale purple. A shrub: flowers in June and July. Found near Aviemore, in Strathspey, by Mr. Brown, and in the Shiant Isles by Mr. G. Don. *Engl. Bot.* vol. xxxv. pl. 2469. *Engl. Fl.* vol. ii. p. 222.

6. CALLU'NA.

Calyx inferior, permanent, double; the outer of four oblong, blunt, fringed leaves; the inner of four elliptical, coloured, polished leaves, concealing the corolla. Corolla of one petal, bell-shaped, deeply four-cleft, erect, much shorter than the inner calyx. Filaments thread-shaped, short, curved. Anthers erect, terminal, lance-shaped, united before bursting, with two deflected bristles at the base. Germen superior, orbicular, depressed. Style cylindrical, erect. Stigma knobbed, with four notches. Capsule orbicular, four-valved, four-celled; the partitions unconnected with the valves, fixed to a central column. Seeds numerous, small, oblong.

C. vulgáris. *Common Ling.* A bushy shrub, from six inches to four feet high: stem irregularly branched: leaves somewhat arrow-shaped, closely imbricated on the young branches, which have a four-cornered

figure: inner calyx rose-coloured: corolla paler. This plant makes excellent and durable thatch, is capable of being converted into ropes for various purposes, forms excellent brooms, and affords a fine yellow dye. Grouse feed almost exclusively upon it. *Engl. Bot.* vol. xv. pl. 1013. *Engl. Fl.* vol. ii. p. 225.

7. ERI'CA.

Calyx inferior, of four oblong, permanent leaves. Corolla of one petal, egg-shaped or bell-shaped, four-cleft, withering. Filaments hair-shaped. Anthers terminal, erect, cleft, united before bursting. Germen superior, roundish. Style thread-shaped, erect. Stigma obtuse. Capsule roundish, four-celled, four-valved, each valve bearing a partition from the centre. Seeds numerous, minute.

E. cinérea. Common Heath. Fine-leaved Heath. Anthers with two serrate appendages at the base; style a little prominent; stigma knobbed; leaves three together.——Stem a foot or more high, branched: leaves narrow, lance-shaped or linear, three together: flowers numerous, in dense clusters, drooping, purple. It is applied to the same purposes as Calluna vulgaris. A shrub: flowers in July and August: grows on heaths, abundantly. *Engl. Bot.* vol. xv. pl. 1015. *Engl. Fl.* vol. ii. p. 226.

E. Tet'ralix. Cross-leaved Heath. Anthers with two simple bristles at the base; styles nearly concealed; leaves fringed, four together.——Stems from six to twelve inches high, branched below: leaves crowded, spreading, lance-shaped, four together, downy and bristly: flowers in dense terminal clusters, rose-coloured. A shrub: flowers in July and August: grows in boggy heaths; not uncommon. *Engl. Bot.* vol. xv. pl. 1014. *Engl. Fl.* vol. ii. p. 226.

E. vágans. Cornish Heath. Anthers without appendages, protruded as well as the style; corolla bell-shaped; leaves four together.——Stems about two feet high, branched: leaves linear, smooth: flower-stalks axillar, crowded together for a large space about the middle of each branch: flowers rose-red. A shrub: flowers in July and August: grows on heaths, in Cornwall, abundantly. *Engl. Bot.* vol. i. pl. 3. *Engl. Fl.* vol. ii. p. 227.

E. ciliáris. Fringed Heath. Anthers without appendages, inclosed in the egg-shaped, inflated corolla; leaves four together, fringed with gland-tipped hairs.——A shrub: flowers in June and July: grows in boggy ground in Cornwall. *Brit. Fl.* p. 176. *Lindl. Syn.* p. 174.

8. DAPHNE.

Calyx inferior, of one leaf, tubular, withering; tube cylindrical, closed, longer than the limb, which is divided into four egg-shaped coloured segments. Corolla none. Filaments short, in two rows. Anthers roundish, two-celled, erect. Germen egg-shaped. Style very short. Stigma knobbed, depressed. Berry oval, one-celled. Seed single, oval, large.

D. Mezéreum. Mezereum. Spurge-Olive. Flowers sessile on the stem, generally three together; leaves lance-shaped, deciduous.——A shrub four or five feet high: flowers rose-coloured, highly fragrant:

flowers in February and March: grows in woods, in the south of England; rare. The whole plant is very acrid. *Engl. Bot.* vol. xx. pl. 1381. *Engl. Fl.* vol. ii. p. 228.

D. Lauréola. Spurge-laurel. Clusters axillar, simple, each of about five flowers, drooping; leaves between inversely egg-shaped and spear-shaped, evergreen.——A shrub about three feet high: flowers deep green. The whole plant is acrid, like the preceding. Flowers in March: grows in woods and hedges. *Engl. Bot.* vol. ii. pl. 119. *Engl. Fl.* vol. ii. p. 229.

9. A'CER.

Calyx inferior, of one leaf, with five oblong, acute segments. Petals five, inversely egg-shaped, of the same size as the segments of the calyx. Filaments awl-shaped, short. Anthers roundish, two-lobed. Germen superior, two-lobed, compressed. Style cylindrical. Stigmas two or three, pointed. Capsules two or three, united at the base, roundish, compressed, each terminating in a membranous wing. Seeds one or two, roundish.

A. Pseudo-platanus. Greater Maple, or *Sycamore.* Leaves five-lobed, unequally serrate; flowers in compound, pendent clusters.——A large tree, common but not indigenous: flowers in May. *Engl. Bot.* vol. v. pl. 303. *Engl. Fl.* vol. ii. p. 230.

A. campéstre. Common Maple. Leaves five-lobed, entire at the margin, the lower lobes notched; flowers in erect corymbose clusters.——A tree with cracked corky bark. The wood is fine-grained and hard, and is much used by turners: flowers in May and June. *Engl. Bot.* vol. v. pl. 304. *Engl. Fl.* vol. ii. p. 231.

TRIGYNIA.

10. POLY'GONUM.

Calyx inferior, turbinate, coloured, deeply divided into five egg-shaped permanent segments. Corolla none. Filaments variable in number, awl-shaped, very short. Anthers roundish. Germen superior, roundish, triangular, or compressed. Styles generally three, in some species two, thread-shaped, very short. Stigmas simple. Seed solitary, triangular, or compressed, pointed.

* *Styles three.*

P. Bistor'ta. Great Bistort. Snake-weed. Stem simple, bearing a single spike; leaves egg-shaped, waved, running down into the foot-stalks.——Stems erect, about two feet high, leafy: flowers rose-coloured. Perennial: flowers in June: grows in pastures and meadows, *Engl. Bot.* vol. viii. pl. 509. *Engl. Fl.* vol. ii. p. 236.

P. vivíparum. Alpine Bistort. Stem simple, bearing a single spike; leaves lance-shaped, revolute at the margin.——Stem from three to eight inches high, erect, leafy: flowers pale red. Perennial: flowers in June and July: grows in pastures. *Engl. Bot.* vol. x. pl. 669. *Engl. Fl.* vol. ii. p. 237.

P. aviculáre. Common Knot-grass. Flowers axillar; leaves lance-shaped, rough-edged; stem procumbent.——Stems several, decumbent, spreading in all directions: leaves alternate, stalked: flowers two or three together, reddish. Annual: flowers in summer and autumn: grows in fields, waste-places, by roads, &c.; common. *Engl. Bot.* vol. xviii. pl. 1252. *Engl. Fl.* vol. ii. p. 238.

P. Fagopy'rum. Buck-wheat. Branks. Leaves between heart-shaped and arrow-shaped; stem nearly erect, without prickles; angles of the seeds equal.——Clusters many-flowered, panicled, spreading: flowers variegated with red, green, and white: the seeds furnish a nutritious meal, which in some parts of England is made into thin cakes called crumpits. It is usual for farmers to sow a crop of buck-wheat, and plough it down for manure. Annual: flowers in July and August. grows in cultivated fields, but is not indigenous. *Engl. Bot.* vol. xv. pl. 1044. *Engl. Fl.* vol. ii. p. 239.

P. Convol'vulus. Black Bind-weed. Leaves between heart-shaped and arrow-shaped; stem twining, angular; segments of the calyx bluntly keeled.——Stem twining to the height of several feet: clusters loose, interrupted, leafy: flowers greenish-white or reddish. Annual: flowers from June to October: grows in corn-fields, gardens, and waste ground; common. *Engl. Bot.* vol. xiv. pl. 941. *Engl. Fl.* vol. ii. p. 240.

** *Styles usually two.*

P. amphíbium. Amphibious Persicaria. Styles two, united half-way up; stamens five; spike egg-shaped; leaves lance-shaped.——Stem round, leafy: leaves stalked, floating, minutely serrate, smooth, slightly heart-shaped at the base: flowers rose-red in beautiful dense spikes. When the plant grows out of the water, the leaves become narrower and hairy, and the stem shorter. Perennial: flowers in July and August: grows in ditches, ponds, and rivers; common. *Engl. Bot.* vol. vii. pl. 435. *Engl. Fl.* vol. ii. p. 232.

P. Persicária. Spotted Persicaria. Styles two, united half way up; stamens six; spikes dense, oblong, erect; stipules fringed.——Stem erect, branched, leafy: leaves lance-shaped, entire, shortly stalked, generally marked about the middle with a blackish spot: flowers rose-coloured. Annual: flowers in July and August: grows in ditches and wet fields; common. *Engl. Bot.* vol. xi. pl. 756. *Engl. Fl.* vol. ii. p. 233.

P. lapathifólium. Pale-flowered Persicária. Styles two, distinct; stamens six; flower-stalks rough; stipules not fringed.——Stem about a foot high, branched, swelled above the joints: leaves broadly lance-shaped, rough-edged, sometimes marked with a blackish spot: flowers reddish or pale green. Annual: flowers in July and August: grows in cultivated ground and on dunghills; common. *Engl. Bot.* vol. xx. pl. 1382. *Engl. Fl.* vol. ii. p. 234.

P. Hydropiper. Biting Persicaria. Styles two, united half way up; stamens six; clusters loose, interrupted, drooping; stem erect; leaves lance-shaped, waved, without spots.——Stem two feet high, swelled above each joint, smooth: clusters terminal, long and slender: flowers pale green. The whole plant has an acrid, burning taste, which is supposed to reside in glandular dots sprinkled over it. Annual: flowers in September: grows in ditches and pools. *Engl. Bot.* vol. xiv. pl. 989. *Engl. Fl.* vol. ii. p. 235.

P. minus. Small Creeping Persicaria. Styles two, united; stamens six; clusters loose, slender, nearly erect; stem decumbent at the base; leaves between linear and lance-shaped.——Stem about a foot high, branched at the base, swelled above each joint: flowers small, reddish-green. Annual: flowers in September: grows in watery places; not common. *Engl. Bot.* vol. xv. pl. 1043. *Engl. Fl.* vol. ii. p. 235.

TETRAGYNIA.

11. PA'RIS.

Calyx inferior, of four lance-shaped, spreading, permanent leaves. Petals four, awl-shaped, permanent. Filaments awl-shaped. Anthers long, linear, two-celled, attached to the middle of the filaments. Germen superior, roundish. Styles four, spreading. Stigmas oblong, downy above. Berry globular, with four blunt corners, four-celled. Seeds several, globular.

P. quadrifólia. Herb Paris. True-love. One-berry. Leaves egg-shaped, generally four.——Stem about a foot high, round, with four broadly egg-shaped leaves at the top: petals and calyx green: anthers and styles yellowish: berry purplish-black. The whole plant is said to be narcotic. Perennial: flowers in May and June: grows in woods; rare. *Engl. Bot.* pl. 7. *Engl. Fl.* vol. ii. p. 241.

12. ADO'XA.

Calyx half-inferior, divided into two or three spreading permanent segments. Corolla of one petal, wheel-shaped, divided into four or five egg-shaped, acute segments, longer than the calyx. Filaments eight or ten, awl-shaped. Anthers roundish. Germen half-superior. Styles four or five, simple, short. Stigmas simple. Berry globular, one-celled, half invested with the permanent calyx. Seeds four.

A. Moschatellina. Tuberous Moschatell.——Root of several imbricated scales: stem solitary erect, three or four inches high: leaves compound: flowers pale green, in a terminal head, four of them five-cleft, with ten stamens, the uppermost one four-cleft with eight stamens. Perennial: flowers in April and May: grows in moist shady places; not uncommon. *Engl. Bot.* vol. vii. pl. 453. *Engl. Fl.* vol. ii. p. 242.

13. ELA'TINE.

Calyx inferior, of four or three roundish, spreading, permanent leaves. Petals four or three, egg-shaped, spreading. Filaments awl-shaped. Anthers roundish. Germen superior, globular. Styles four or three, erect, very short. Stigmas simple. Capsule globose, four- or three-valved, four- or three-celled; the partitions attached only to the column. Seeds numerous, oblong.

E. tripétala. Small Water-wort. Leaves opposite, rough; flowers generally three-cleft, with six stamens.——Leaves elliptical, rough on the upper side with minute cartilaginous points: petals reddish. Annual: flowers in July and August: grows on the margins of ponds or ditches, in England; rare. *Engl. Bot.* vol. xiv. pl. 955. *Engl. Fl.* vol. ii. p. 243.

Class IX. ENNEANDRIA.

Plants bearing Flowers with Nine Stamens.

Order I. HEXAGYNIA. *Six Pistils.*

1. BU'TOMUS. *Calyx* none. *Petals* six. *Capsules* six, many seeded.

ENNEANDRIA.—HEXAGYNIA.

1. BU'TOMUS.

Calyx none. Petals six, egg-shaped, withering, the three outer smaller and more acute. Filaments awl-shaped, shorter than the corolla, six in the outer row, three in the inner. Anthers oblong, two-celled, two-valved. Germens six, oblong, tapering, ending each in a style. Stigmas simple. Capsules six, oblong, tapering, one-celled, two-valved. Seeds numerous, oblong.

B. umbellátus. Common Flowering Rush. Root tuberous. Leaves erect, narrow, acute, all radical. Scape longer than the leaves, round, smooth, terminating in an umbel of beautiful rose-coloured flowers. Perennial: flowers in June and July. Grows in ditches, pools, slow rivers, and lakes, near the margin. *Eng. Bot.* vol. x. pl. 651. *Engl. Fl.* vol. ii. p. 245.

Class X. DECANDRIA.

Plants bearing Flowers with Ten Stamens.

Order I. MONOGYNIA. *One Pistil.*

* *Flowers with more than one petal.*

1. MONO'TROPA. *Petals* varying in number, bulging at the base. *Anthers* one-celled, two-valved.
4. PY'ROLA. *Petals* five. *Anthers* two-celled, opening with two pores.

** *Flowers of one petal, regular.*

2. ANDRO'MEDA. *Corolla* egg-shaped, or bell-shaped. *Capsule* five-celled.
3. A'RBUTUS. *Corolla* egg-shaped, transparent at the base. *Berry* five-celled.
(*Vaccinium Myrtillus* and *Oxycoccos*. *Menziesia cærulea.*)

Order II. DIGYNIA. *Two Pistils.*

7. SCLERA'NTHUS. *Corolla* none. *Calyx* of one leaf. *Seeds* two.
5. CHRYSOSPLE'NIUM. *Corolla* none. *Calyx* coloured. *Capsule* two-beaked. *Seeds* numerous.
6. SAXI'FRAGA. *Corolla* of five petals. *Calyx* deeply divided into five segments. *Capsule* two-beaked. *Seeds* numerous.

8. SAPONA'RIA. *Corolla* of five petals. *Calyx* tubular, of one leaf, naked at the base. *Capsule* oblong.
9. DIA'NTHUS. *Corolla* of five petals. *Calyx* tubular, of one leaf, with scales at the base. *Capsule* oblong.

Order III. TRIGYNIA. *Three Pistils.*

12. ARENA'RIA. *Capsule* one-celled, many-seeded. *Petals* five, undivided, spreading. *Calyx* five-leaved.
11. STELLA'RIA. *Capsule* one-celled, many-seeded. *Petals* five, deeply cleft, spreading. *Calyx* five-leaved.
13. CHERLE'RIA. *Capsule* one-celled, many-seeded. *Petals* none. Five *glands* at the base of the stamens.
10. SILE'NE. *Capsule* with three incomplete cells. *Petals* with claws, their limb cleft. *Calyx* of one leaf.
(Polygonum Bistorta.)

Order IV. PENTAGYNIA. *Five Pistils.*

14. COTYLE'DON. *Capsules* five, each with a scale at the base. *Corolla* of one petal.
15. SE'DUM. *Capsules* five, each with a scale at the base. *Corolla* of five petals.
16. O'XALIS. *Capsule* five-celled, angular, each cell two-seeded. *Petals* connected at the base.
18. LY'CHNIS. *Capsule* one or five-celled, each cell many-seeded. *Calyx* tubular, membranous, five-toothed. *Petals* five, clawed, crowned.
17. AGROSTE'MMA. *Capsule* one-celled. *Calyx* tubular, leathery, five-cleft. *Petals* five, clawed, with undivided limb.
19. CERA'STIUM. *Capsule* one-celled. *Calyx* of five leaves. *Petals* five, cleft.
20. SPE'RGULA. *Capsule* one-celled. *Calyx* of five leaves. *Petals* five, undivided.
(Adoxa. Rhodiola. Stellaria uliginosa and *scapigera.)*

DECANDRIA.—MONOGYNIA.

1. MONO'TROPA.

Calyx none. Petals ten or eight, oblong, erect, deciduous, the outermost bulging at the base, hollow within, and bearing honey. Filaments awl-shaped, erect. Anthers kidney-shaped, one-celled, two-valved. Germen superior, roundish, tapering. Style cylindrical, short, erect. Capsule egg-shaped, with five or four furrows, cells, and valves. Seeds numerous, minute, oval.

M. Hypópitys. Yellow Bird's-nest. Flowers in a drooping cluster; the lateral ones with eight, the terminal with ten stamens.——Root fibrous, stem about eight inches high, simple, with egg-shaped scales. Flowers large, of a yellowish colour. Perennial: flowers in July: grows on decayed stumps of trees; not common. *Eng. Bot.* vol. i. pl. 69. *Engl. Fl.* vol. ii. p. 247.

2. ANDRO'MEDA.

Calyx inferior, small, coloured, permanent, deeply divided into five acute segments. Corolla of one petal, egg-shaped or bell-shaped; the limb with five reflected segments. Filaments awl-shaped, shorter than the corolla. Anthers two-celled, opening by two terminal pores, and surmounted by two horns. Germen roundish. Style cylindrical, longer than the stamens, permanent. Stigma obtuse. Capsule roundish, five-cornered, five-celled, five-valved, with partitions from the centre of the valves. Seeds numerous, roundish.

A. polifólia. Marsh Andromeda. Wild Rosemary. Clusters terminal; leaves alternate, lance-shaped, revolute; glaucous beneath.——A shrub, about six inches high, with pendulous, rose-coloured flowers, in clusters: flowers in June: grows on wet heaths in the north of England, and in Scotland; not common. *Engl. Bot.* vol. x. pl. 713. *Engl. Fl.* vol. ii. p. 251.

3. A'RBUTUS.

Calyx inferior, of one leaf, small, divided into five obtuse segments. Corolla of one petal, egg-shaped, transparent at the base; the limb with five small, recurved segments. Filaments awl-shaped, swelling in the middle, half as long as the corolla. Anthers two-celled, opening by two terminal pores, and bearing two short horns. Germen superior, roundish, sitting upon a ten-dotted receptacle. Style cylindrical, as long as the corolla. Stigma rather thick and blunt. Berry roundish, five-celled. Seeds small, angular, bony.

A. alpina. Black Bear-berry. Stem procumbent; leaves inversely egg-shaped, serrate.——Leaves alternate, stalked, inversely egg-shaped, reticulated with numerous veins, deciduous: flowers white, in short terminal clusters: berry black. A small shrub: flowers in May and June: grows on dry mountainous heaths in Scotland. *Engl. Bot.* vol. xxix. pl. 2030. *Engl. Fl.* vol. ii. p. 253.

A. U'va-úrsi. Red Bear-berry. Stem procumbent; leaves inversely egg-shaped, smooth, entire.——Leaves alternate, stalked, thick stiff, veiny, evergreen, wrinkled: flowers pale rose-coloured or white, in short, drooping, terminal clusters: berry bright red, mealy and harsh: a small shrub: flowers in June: grows on dry heaths, abundantly. The whole plant is highly astringent, and has been employed in calculus. The berries are eaten in the Highlands, although rather harsh. *Engl. Bot.* vol. x. pl. 714. *Engl. Fl.* vol. ii. p. 253.

4. PY'ROLA.

Calyx inferior, of one leaf, permanent, deeply divided into five rounded segments. Petals five, roundish, spreading. Filaments awl-shaped, curved, shorter than the corolla. Anthers large, pendulous, two-celled, each opening by a round pore at the top. Germen superior, roundish, five-lobed. Style thread-shaped, longer than the stamens, permanent. Stigma thickened, somewhat notched. Capsule

globular, depressed, five-cornered, five-celled, five-valved. Seeds very numerous, minute, oval, each in a membranous coat.

P. rotundifólia. Round-leaved Winter-green. Stamens ascending; style twice as long, declining and recurved; leaves nearly round, obscurely crenate.——Flower-stalk about eight inches high, triangular, terminating in an oblong, erect cluster of numerous, white, fragrant flowers. Perennial: flowers in July and August: grows in dry heathy woods; not common. *Engl. Bot.* vol. iii. pl. 213. *Engl. Fl.* vol. ii. p. 255.

P. média. Intermediate Winter-green. Stamens all regularly incurvate; style twice as long, deflected; leaves nearly orbicular, crenate.——Nearly as large as the preceding, with a triangular, spirally twisted stalk, terminating in a cluster of smaller pendulous white flowers, with a delicate pink tinge at the margin. Perennial: flowers in July and August: grows in dry woods; rare. *Engl. Bot.* vol. xxviii. pl. 1945. *Engl. Fl.* vol. ii. p. 256.

P. minor. Lesser Winter-green. Stamens all regularly incurvate; style of the same length, straight; leaves inversely egg-shaped, crenate.——Stalk four-cornered, slightly twisted, terminating in a long and slender cluster of drooping, pale rose-coloured flowers. Perennial: flowers in July and August: grows in dry grounds and thickets; not common. *Engl. Bot.* vol. iii. pl. 152. *Engl. Fl.* vol. ii. p. 158.

P. secúnda. Serrate Winter-green. Leaves egg-shaped, acute, serrate; flowers drooping, all inclining one way.——Stalk about four inches long, with a dense cluster of white, drooping flowers. Perennial: flowers in July and August: grows in woods. *Engl. Bot.* vol. viii. pl. 517. *Engl. Fl.* vol. ii. p. 250.

P. uniflóra. Single-flowered Winter-green. Stalk single-flowered; leaves egg-shaped, acute, serrate.——Root creeping: stems reclining, an inch or two long, simple: leaves egg-shaped, acute, sharply serrate: stalk about three inches long, erect, bearing a single, large, white fragrant flower. Perennial: flowers in July: found in a fir-wood near Brodie House in Morayshire. *Engl. Bot.* vol. iii. pl. 146. *Engl. Fl.* vol. ii. p. 258.

DIGYNIA.

5. CHRYSOSPLE'NIUM.

Calyx superior, of one leaf, deeply divided into four or five unequal, spreading, permanent, coloured segments. Corolla none. Nectary a glandular ring within the insertion of the stamens. Filaments eight or ten, awl-shaped, erect, very short. Anthers roundish, two-lobed. Germen inferior, roundish, terminated by two awl-shaped styles, as long as the stamens. Stigmas obtuse. Capsule two-beaked, one-celled, two-valved. Seeds roundish, numerous, small.

C. alternifólium. Alternate-leaved Golden-saxifrage. Leaves alternate.——Roots fibrous: stems four or five inches high, angular, decumbent: leaves kidney-shaped, broadly crenate; radical ones on long

stalks, those of the stem on short stalks: flowers in small umbels, greenish-yellow, four-cleft and with eight stamens, excepting the uppermost. Perennial: flowers in May: grows on the borders of rivulets in shady places; not common. *Engl. Bot.* vol. i. pl. 54. *Engl. Fl.* vol. ii. p. 260.

C. oppositifólium. Opposite-leaved Golden-saxifrage. Leaves opposite.——About the same size as the last, of a paler green, with smaller leaves. Perennial: flowers in May: grows in rivulets in shady places; common. *Engl. Bot.* vol. vii. pl. 490. *Engl. Fl.* vol. ii. p. 260.

6. SAXIFRAGA.

Calyx inferior, half-inferior, or nearly superior, of one leaf, divided into five permanent segments. Petals five, attached to the calyx, narrow at the base, spreading. Filaments awl-shaped, spreading. Anthers roundish, two-lobed. Germen superior, or more or less inferior, roundish, terminating in two short, spreading styles. Stigmas obtuse. Capsule nearly egg-shaped, two-beaked, two-celled. Seeds minute, numerous, roundish.

* *Leaves all radical, undivided.*

S. umbrósa. London Pride. None-so-pretty. Leaves inversely egg-shaped, smooth, with cartilaginous acutely crenate margins; scape panicled; capsule superior.——Stalk from six to ten inches high: panicle branched: petals pale flesh-coloured, yellow near the base, spotted with crimson on the disk: capsule and calyx reddish. Perennial: flowers in June: grows in mountainous situations in Yorkshire. *Engl. Bot.* vol. x. pl. 663. *Engl. Fl.* vol. ii. p. 263. *Don in Lin. Tr.* vol. xiii. p. 352.

S. stellàris. Starry Saxifrage. Leaves oblong, inclining to wedge-shaped, coarsely serrate, tapering and entire at the base; panicle corymbose, few-flowered; capsule superior.——Stalks about four inches high: flowers white, with two yellow spots at the base of the petals. Perennial: flowers in June: grows by rills, towards the summit of high mountains; not rare. *Engl. Bot.* vol. iii. pl. 167. *Engl. Fl.* vol. ii. p. 265. *Don in Lin. Tr.* vol. xiii. p. 356.

S. nivàlis. Clustered Alpine Saxifrage. Leaves inversely egg-shaped, serrate, tapering, and entire at the base; cluster dense, few-flowered; capsule half-inferior.——This species has great resemblance to the last, but is shorter and stouter: petals white, with two pale green spots. Perennial: flowers in June and July: grows in clefts of rocks on the summits of the higher mountains of Wales and the Highlands of Scotland. *Engl. Bot.* vol. vii. pl. 440. *Engl. Fl.* vol. ii. p. 265. *Don in Lin. Tr.* vol. xiii. p. 387.

** *Stem Leafy. Leaves undivided.*

S. oppositifólia. Purple Saxifrage. Leaves egg-shaped, opposite, fringed, imbricated; flowers solitary, terminal.——Stems numerous, prostrate: flowers large, with purplish-red petals. Perennial: flowers in May and June: grows in rocky places on high mountains. *Engl. Bot.* vol. i. pl. 9. *Engl. Fl.* vol. ii. p. 266. *Don in Lin. Tr.* vol. xiii. p. 360.

S. Hirculus. *Yellow Marsh Saxifrage.* Leaves lance-shaped, alternate, naked; calyx reflected, obtuse, fringed; capsule superior.—Stems simple, from four to eight inches high: flowers terminal, usually two or three, with deep yellow petals, dotted with red. Perennial: flowers in August: grows in bogs in the north of England; rare. *Engl. Bot.* vol xv. pl. 1009. *Engl. Fl.* vol. ii. p. 267. *Don in Lin. Tr.* vol. xiii. p. 372.

S. aizoides. *Yellow Mountain Saxifrage.* Leaves alternate, linear, fringed; stem decumbent at the base; capsule half superior.—Stems decumbent at the base, then erect, from four to eight inches long, with a terminal panicle of yellow flowers, sprinkled with red dots. Perennial: flowers in July, August, and September: grows by rills in mountainous situations; common in Scotland. *Engl. Bot.* vol. i. pl. 39. *Engl. Fl.* vol. ii. p. 268. *Don in Lin. Tr.* vol. xiii. p. 375.

* * * *Stem leafy. Leaves lobed.*

S. granulàta. *White Meadow Saxifrage.* Leaves kidney-shaped, lobed; stem panicled; root granulated; germen half-inferior.—Stem about a foot high: petals white, without spots. Perennial: flowers in May: grows in meadows and pastures; not uncommon. *Engl. Bot.* vol. vii. pl. 500. *Engl. Fl.* vol. ii. p. 270. *Don in Lin. Tr.* vol. xiii. p. 362.

S. cérnua. *Drooping Bulbous Saxifrage.* Leaves somewhat palmate, stalked; stem simple, one-flowered, with axillar bulbs; germen superior.——Roots scaly: stem from four to eight inches high: flower white, on a terminal downy stalk. Perennial: flowers in July: grows by rivulets on the highest mountains of Scotland; rare. *Engl. Bot.* vol. x. pl. 664. *Engl. Fl.* vol. ii. p. 270. *Don in Lin. Tr.* vol. xiii. p. 364.

S. rivulàris. *Alpine Brook Saxifrage.* Leaves palmate, stalked, the uppermost spatulate; stem few-flowered; root fibrous; germen half-inferior.——Leaves with five or three lobes: stem about two inches high, with a few small, white flowers. Annual: flowers in June and July: grows by rivulets on several of the higher mountains of Scotland. *Engl. Bot.* vol. xxxii. pl. 2275. *Engl. Fl.* vol. ii. p. 271. *Don in Lin. Tr.* vol. xiii. p. 367.

S. tridactylites. *Rue-leaved Saxifrage.* Leaves wedge-shaped, three or five cleft, the uppermost undivided; stem panicled; stalks single-flowered, alternate; germen inferior.——Downy and glutinous, turning red after flowering: stem erect, three or four inches high: flowers small, white. Annual: flowers in April and May: grows on walls, roofs, and dry bare ground. *Engl. Bot.* vol. vii. pl. 501. *Engl. Fl.* vol. ii. p. 271. *Don in Lin. Tr.* vol. xiii. p. 441.

S. muscòides. *Matted Saxifrage.* Leaves linear, obtuse, trifid or undivided; flowers few, corymbose; petals nearly linear.——Hairy and glutinous: flowers from three to six: petals pale yellow, three-nerved, rather longer than the calyx. Perennial: flowers in May: grows on rocky mountains in Westmoreland; very rare. *Engl. Fl.* vol. ii. p. 272. *Don. Lin. Tr.* vol. xiii. p. 437.

S. pygmæ'a. *Dwarf Alpine Saxifrage.* Leaves linear, abrupt, undivided; flowers corymbose; petals inversely egg-shaped.——Stems erect, slender, two or three inches high, bearing three or four small flowers: petals greenish-yellow, with three reddish ribs. Perennial: grows in

the Highlands of Scotland, the place undetermined. *Engl. Bot.* vol. xxxiii. pl. 2314: *S. moschata. Don. Lin. Tr.* vol. xiii. p. 439.

S. cæspitósa. Tufted Alpine Saxifrage. Root-leaves crowded, three or five-cleft, obtuse, fringed, the lowermost undivided; stem erect, few-flowered; calyx obtuse; petals rounded, three-nerved; germen half-inferior.——This species varies greatly in luxuriance, the number of flowers, and the degree of hairiness: petals white, with green nerves. Perennial: flowers in May and June: grows on the highest mountains of Wales. *Engl. Bot.* vol. xii. pl. 794. *Engl. Fl.* vol. ii. p. 274. *Don in Lin. Tr.* vol. xiii. p. 428.

S. hírta. Hairy Alpine Saxifrage. Root-leaves crowded, five or three-cleft, pointed, fringed; flowers few, corymbose; calyx acute; petals inversely egg-shaped, three-ribbed; germen half-inferior.—— Closely allied to the last: petals white, with green nerves. Perennial: flowers in June and July: grows on alpine rocks, in Wales and Scotland. *Engl. Bot.* vol. xxxii. pl. 2291. *Engl. Fl.* vol. ii. p. 274. *Don in Lin. Tr.* vol. xiii. p. 431.

S. platypétala. Broad-petalled Saxifrage. Root-leaves five-cleft, the others three-cleft, with bristle-pointed lobes; segments of the calyx egg-shaped, pointed; petals nearly orbicular, flat, with numerous lateral veins.——Stem panicled, bearing four or five large flowers, with white petals, which are three-nerved, the lateral nerves dividing. Perennial: flowers in June: found on Snowdon, and the Clova mountains. *Engl. Fl.* vol. ii. p. 276. *Don in Lin. Tr.* vol. xiii. p. 422.

S. denudáta. Smooth Grampian Saxifrage. Root-leaves five-cleft, the others three-cleft, with linear acute, bristle-pointed segments; segments of the calyx lance-shaped, minutely pointed; petals inversely egg-shaped, cleft.——Stems erect, an inch and a half high, bearing one or two flowers: petals with three simple, straight ribs, and notched at the point. Perennial: found by Mr. G. Don on the Grampian hills, in Angus-shire. *Engl. Fl.* vol. ii. p. 277. *Don in Lin. Tr.* vol. xiii. p. 424.

S. hypnoídes. Mossy Saxifrage. Ladies' Cushion. Root-leaves three or five-cleft, the others undivided, all bristle-pointed and fringed; segments of the calyx egg-shaped, pointed; petals inversely egg-shaped.——Stem four or five inches high, terminating in a corymbose panicle of from three to five flowers: petals white, triple-ribbed. Perennial: flowers in May and June: grows on rocky mountains. *Engl. Bot.* vol. vii. pl. 454. *Engl. Fl.* vol. ii. p. 277. *Don in Lin. Tr.* vol. xiii. p. 447.

S. elongélla. Long-stalked Saxifrage. Root-leaves three or five-cleft, those of the short erect shoots undivided or three-cleft, all bristle-pointed, slightly fringed; flower-stalks very long, simple; segments of the calyx pointed; petals inversely egg-shaped.——Closely allied to the last, and differing chiefly in the inflorescence. Perennial: flowers in June: found by Mr. G. Don on a rock near Lintrathen, in Angus-shire. *Engl. Bot.* vol. xxxii. pl. 2277. *Engl. Fl.* vol. ii. p. 279. *Don in Lin. Tr.* vol. xiii. p. 449.

S. leptophy'lla. Narrow-spreading-leaved Saxifrage. Root-leaves deeply five-cleft; those of the very long procumbent shoots deeply three-cleft or undivided; segments narrow lance-shaped, very acute,

widely spreading; calyx between oblong and egg-shaped; petals spatulate, undivided.——Stems three or four inches high, nearly smooth, bearing several drooping white flowers: petals entire, triple-ribbed. Perennial: grows, according to Mr. Macnab, on mountains in Wales. *Engl. Fl.* vol. ii. p. 279. *Don in Lin. Tr.* vol. xiii. p. 450.

S. la'te-vírens. Bright-green Alpine Saxifrage. Leaves deeply five- or three-cleft, with linear, acute segments; segments of the calyx lance-shaped, pointed; petals spatulate, notched.——Stems few, erect, smooth, bearing about three flowers: flowers white, bell-shaped: petals with straight, simple, green ribs, united above the base. Perennial: grows on moist rocks on the higher mountains of Scotland. *Engl. Fl.* vol. ii. p. 280. *Don in Lin. Tr.* vol. xiii. p. 451.

S. pedatífida. Web-foot-leaved Saxifrage. Root-leaves kidney-shaped, divided in a pedate manner into seven lobes; panicle cymose, many-flowered; calyx superior, with narrow lance-shaped segments. ——Stems about six inches high, panicled at the top: flowers white, small, erect. Perennial: flowers in May: grows on the mountains of Clova, in Angus-shire. *Engl. Bot.* vol. xxxii. pl. 2278. *Engl. Fl.* vol. ii. p. 280. *Don in Lin. Tr.* vol. xiii. p. 414.

7. SCLERANTHUS.

Calyx inferior, of one leaf, tubular, with five shallow acute clefts, permanent, contracted at the neck. Corolla none. Filaments from five to ten, awl-shaped, erect. Anthers roundish, two-lobed. Germen superior, roundish. Styles thread-shaped, spreading, as long as the stamens. Stigmas simple, downy. Capsule egg-shaped, one-celled. Seeds two, convex on one side, flat on the other.

S. ánnuus. Annual Knawel. Calyx of the fruit with acute spreading segments; stems spreading.——Root small, tapering: stems numerous, branched, and many-flowered above: leaves linear, acute, united at the base by a membranous fringed border: flowers small, green. Annual: flowers in July: grows in dry fields; common. *Engl. Bot.* vol. v. pl. 351. *Engl. Fl.* vol. ii. p. 282.

S. perénnis. Perennial Knawel. Calyx of the fruit with obtuse converging segments; stems procumbent.——Root woody, branched: stems numerous, decumbent or prostrate, three or four inches long: leaves linear, tapering. Perennial: flowers in the autumnal months: grows in open dry fields. *Engl. Bot.* vol. v. pl. 352. *Engl. Fl.* vol. ii. p. 283.

8. SAPONA'RIA.

Calyx inferior, of one leaf, tubular, with five teeth, permanent. Petals five, with narrow angular claws, as long as the calyx, the limb flat, dilated towards the end. Filaments awl-shaped, as long as the calyx. Anthers oblong, obtuse. Germen nearly cylindrical. Styles two, erect, parallel, as long as the stamens. Stigmas acute, downy. Capsule oblong, one-celled, concealed in the calyx. Seeds numerous, roundish.

S. officinâlis. Common Soap-wort. Calyx cylindrical; leaves spear-shaped, inclining to elliptical.——A nearly smooth, somewhat succulent plant: stems about eighteen inches high, panicled in the upper part: flowers erect, flesh-coloured or white. The whole plant is bitter. When bruised and agitated in water, it raises a lather like soap, which washes greasy spots out of clothes. Perennial: flowers in August and September: grows in meadows and in shady places. *Engl. Bot.* vol. xv. pl. 1060. *Engl. Fl.* vol. ii. p. 284.

9. DIA'NTHUS.

Calyx inferior, of one leaf, cylindrical, striated, permanent, with five teeth at the mouth, and two or more pairs of opposite imbricated scales at the base. Petals five, their claws as long as the calyx, narrow and angular; the limbs flat, dilated towards the end, obtuse, variously notched. Filaments awl-shaped, as long as the calyx, spreading at the top. Anthers oblong, compressed. Germen oval. Styles two, awl-shaped, longer than the stamens. Stigmas revolute, tapering. Capsule cylindrical, one-celled, opening with four teeth. Seeds numerous, roundish, compressed.

D. Armèria. Deptford Pink. Flowers aggregate; scales of the calyx lance-shaped, downy, as long as the tube.——Stem about a foot high, corymbose above: flowers small, speckled pink and white. Annual: flowers in July and August: grows in pastures. *Eng. Bot.* vol. v. pl. 317. *Engl. Fl.* vol. ii. p. 286.

D. prólifer. Proliferous Pink. Flowers aggregate; scales of the calyx egg-shaped, blunt, longer than the tube.——Stem erect, simple, from three to twelve inches high: flowers red, scentless. Annual: flowers in July: grows in sandy pastures: rare: Selsey Island, Sussex; near Norwich; in a marl pit at Sandridge Hill, Hanley Castle, Worcestershire. *Engl. Bot.* vol. xiv. pl. 956. *Engl. Fl.* vol. ii. p. 286.

D. Caryophy'llus. Clove Pink. Flowers solitary; scales of the calyx almost rhomboidal, very short; petals irregularly toothed.——Stem panicled: leaves linear, channelled: flowers pale flesh-coloured. Perennial: flowers in June and July: grows on old walls, in various parts of England. *Engl. Bot.* vol. iii. pl. 214. *Engl. Fl.* vol. ii. p. 287.

D. deltoides. Maiden Pink. Flowers solitary; scales of the calyx two, broadly lance-shaped, acute; leaves bluntish, somewhat downy; petals notched, smooth.——Stems numerous, decumbent, matted, when in flower ascending, six or eight inches long: flowers pale rose-colour, with a circle of deeper-coloured dots at the mouth. Perennial: flowers from July to October: grows in dry hilly pastures. *Engl. Bot.* vol. i. pl. 61. *Engl. Fl.* vol. ii. p. 288.

D. cæsius. Mountain Pink. Stems single-flowered; scales of the calyx short, roundish; leaves rough at the edges; petals irregularly toothed.——Stems from four to six inches high, four-cornered; flowers pale rose-coloured, fragrant. Perennial: flowers in July: grows on Cheddar Rocks, Somersetshire. *Engl. Bot.* vol. i. pl. 62. *Engl. Fl.* vol. ii. p. 288.

TRIGYNIA.

10. SILE'NE.

Calyx inferior, of one leaf, tubular, with five teeth, permanent. Petals five; claws narrow, as long as the calyx, bordered; limb flat, frequently cleft, either naked at the base, or furnished with two teeth. Filaments awl-shaped, five alternate ones attached to the petals, and later than the rest. Anthers oblong. Germen cylindrical or egg-shaped. Styles three, longer than the stamens. Stigmas oblong, oblique, downy on the upper side. Capsule egg-shaped, covered by the calyx, imperfectly three-celled, opening at the top with six teeth. Seeds numerous, kidney-shaped.

* *Flowers lateral, solitary.*

S. anglica. English Catchfly. Hairy and clammy; flowers lateral, alternate, erect; the lower capsules bent back.——Stem branched, spreading: leaves lance-shaped: flowers erect, with small, white, cleft petals. Annual: flowers in June and July: grows in cultivated fields. *Engl. Bot.* vol. xvii. pl. 1178. *Engl. Fl.* vol. ii. p. 291.

S. quinquevúlnera. Variegated Catchfly. Hairy; flowers lateral, alternate, erect; capsules erect.——Less hairy and less clammy than the preceding: petals not notched, their limb white, with a blood-red spot at the base. Annual: flowers in June and July: grows in sandy corn-fields; rare. *Engl. Bot.* vol. ii. pl. 86. *Engl. Fl.* vol. ii. p. 292.

** *Stem forked with panicled branches.*

S. inflàta. Bladder Campion. White Bottle. Flowers in panicles, drooping; petals cleft half-way down; calyx smooth, inflated, reticulated; stem erect; leaves egg-shaped, acute, glaucous.——Stem two or three feet high: calyx pale or purplish, beautifully reticulated with veins: petals white. Perennial: flowers in July: grows in fields and pastures, and among rubbish; common; the boiled leaves taste like peas. *Engl. Bot.* vol. iii. pl. 164: *Cucubalus Behen. Engl. Fl.* vol. ii. p. 292.

S. maritima. Sea Campion. Flowers in panicles, or solitary; petals cleft, each with a cleft acute scale; calyx smooth, inflated, reticulated; stem recumbent; leaves lance-shaped.——Stems procumbent at the base, about a foot long: calyx purplish, beautifully reticulated: petals white. Perennial: flowers in July and August: grows on the sea-shore above water-mark, and by alpine torrents. *Engl. Bot.* vol. xiv. pl. 957. *Engl. Fl.* vol. ii. p. 293.

*** *Stem and branches forked, leafy.*

S. cónica. Striated Corn Catchfly. Stem forked; petals cleft; calyx when in fruit conical, with thirty furrows; leaves softly downy.—— Stem erect, repeatedly forked, downy: flowers from the forks of the

stem, stalked, erect, fragrant in the evening: petals small: the limb red, deeply cleft: scale deeply divided. Annual: flowers in July: grows in sandy fields in England; rare. *Engl. Bot.* vol. xiii. pl. 922. *Engl. Fl.* vol. ii. p. 294.

S. noctiflóra. Night-flowering Catchfly. Stem forked; petals cleft; calyx with ten hairy ribs; its teeth linear, almost as long as the tube. ——Stem erect, round, spreading, from one to two feet high: flowers solitary, from the forks of the stem, sweet-scented during the night: petals with a deeply cleft, pale rose-coloured limb, and blunt cleft scale. Annual: flowers in July: grows in sandy fields in England. *Engl. Bot.* vol. v. pl. 291. *Engl. Fl.* vol. ii. p. 295.

**** *Panicle forked, corymbose, leafless.*

S. Arméria. Common Catchfly. Panicles forked, level at the top; petals cleft, each with two awl-shaped scales; calyx and leaves smooth; capsule not longer than its stalk.——Stem erect, round, with a brown, hairy, and clammy ring under the upper joints, to which insects stick: flowers erect, crowded, scentless: petals with a rose-coloured limb, and reddish scales. Annual: flowers in July and August: grows in fields and on old walls. *Engl. Bot.* vol. xx. pl. 1398. *Engl. Fl.* vol. ii. p. 296.

***** *Stem panicled, imperfectly forked.*

S. nútans. Nottingham Catchfly. Panicle with drooping flowers pointing one way; petals deeply cleft, with linear segments and an acute cleft scale; leaves lance-shaped, downy.——Stem about a foot and a half high, recumbent at the base, erect, simple, round, downy, the three upper joints beset with clammy hairs: flowers white, sweet-scented in the evening. Perennial: flowers in June and July: grows on rocks and walls, and in hilly pastures. *Eng. Bot.* vol. vii. pl. 465. *Engl. Fl.* vol. ii. p. 296.

S. Otites. Spanish Catchfly. Panicle with somewhat whorled erect branches; flowers dioecious; petals linear, undivided, destitute of scale; leaves spatulate, roughish.——Stem erect, from one to two feet high, round, clammy about the middle of the upper joint below the panicle: flowers pale green. Perennial: flowers in July and August: grows in dry sandy fields, in England; rare. *Engl. Bot.* vol. ii. pl. 85: *Cucubalus Otites. Engl. Fl.* vol. ii. p. 298.

****** *Stems single-flowered.*

S. acáulis. Moss Campion. Stems tufted; leaves linear, acute, fringed at the base; stalks terminal, solitary, single-flowered; petals slightly notched, crowned.——Grows in dense tufts and patches towards the summits of the Highland mountains, as well as on those of Wales: flowers rose-coloured. Perennial: flowers in June and July. *Engl. Bot.* vol. xvi. pl. 1081. *Engl. Fl.* vol. ii. p. 299.

11. STELLA'RIA.

Calyx inferior, of five broadly lance-shaped, acute, spreading, permanent leaves. Petals five, deeply cleft, spreading, oblong, withering. Filaments thread-shaped, shorter than the petals, the five alternate

ones shorter. Five notched glandular nectaries at the base of the stamens. Anthers roundish. Germen roundish. Styles three, hair-like, spreading. Stigmas obtuse, downy. Capsule egg-shaped, one-celled, six-valved, covered by the calyx. Seeds numerous, roundish, compressed.

S. némorum. Wood Stitchwort. Lower leaves heart-shaped, stalked; upper egg-shaped, sessile; panicle repeatedly forked.——Stems round, lax, very brittle, about a foot high: leaves pale green, tender: flowers white. Perennial: flowers in May and June: grows in moist woods, in the north of England and in Scotland. *Engl. Bot.* vol. ii. pl. 92. *Engl. Fl.* vol. ii. p. 300.

S. média. Common Chickweed, or *Stitchwort.* Leaves egg-shaped; stems procumbent, with a hairy alternating line on one side; stamens varying from three to ten.——Stem much branched, spreading, brittle: flowers small, with white petals: stamens three, five, or ten. Poultry and small birds eat the seeds and even the whole plant. Annual: flowers during the whole year: grows everywhere in waste and cultivated ground. *Engl. Bot.* vol. viii. pl. 537. *Engl. Fl.* vol. ii. p. 301.

S. Holóstea. Greater Stitchwort. Leaves lance-shaped, bristle-serrate; petals inversely heart-shaped; calyx ribless, much shorter than the petals.——Stems from one to two feet high, very slender and decumbent at the base, square, erect, panicled at the top: flowers large, pure white. Perennial: flowers in May and June: grows in woods and hedges; common. *Engl. Bot.* vol. viii. pl. 511. *Engl. Fl.* vol. ii. p. 301.

S. graminea. Lesser Stitchwort. Leaves between linear and lance-shaped, not serrate; panicle terminal, spreading; calyx three-ribbed, nearly as long as the petals.——Stems very weak and brittle, supporting themselves by the surrounding plants, from one to three feet long: flowers with white petals. Perennial: flowers in May, June, and July: grows in grassy or bushy places; common. *Engl. Bot.* vol. xii. pl. 803. *Engl. Fl.* vol. ii. p. 302.

S. glaúca. Glaucous Marsh Stitchwort. Leaves between linear and lance-shaped, not serrate, glaucous; flowers upon long solitary axillar stalks; calyx three-ribbed, half as long as the petals.——Intermediate between *S. holostea* and *S. graminea*, but easily distinguished from either: stem about a foot high. Perennial: grows in marshy places: flowers in June and July. *Engl. Bot.* vol. xii. pl. 825. *Engl. Fl.* vol. ii. p. 303.

S. uliginósa. Bog Stitchwort. Leaves between lance-shaped and elliptical, entire, with the tip callous; flowers irregularly panicled, lateral or terminal; petals shorter than the calyx.——Smooth, pale, and somewhat glaucous: stems weak, square, about a foot high: flowers small, white. Annual: flowers in June: grows in rivulets, ditches, and boggy places; common. *Engl. Bot.* vol. xv. pl. 1074. *Engl. Fl.* vol. ii. p. 303.

S. scapígera. Many-stalked Stitchwort. Leaves between lance-shaped and linear, rough on the margin; stem shorter than the flower-stalks; leaves of the calyx three-ribbed, as long as the petals.——Stem erect,

very short, angular: leaves crowded: flowers small, white. Perennial: flowers in June: grows by the sides of rivulets on the higher mountains of Scotland. *Engl. Bot.* vol. xviii. pl. 1269. *Engl. Fl.* vol. ii. p. 304.

S. cerastoides. Alpine Stitchwort. Leaves between oblong and elliptical, bluntish, smooth; stems two-flowered, with a lateral hairy line; flower-stalks downy; leaves of the calyx with a single downy rib.——stems spreading, three or four inches long: flowers erect, terminal: petals nearly twice the length of the calyx, cleft nearly half-way down. Perennial: flowers in June: grows on Ben Nevis and other high mountains in Scotland. *Engl. Bot.* vol. xiii. pl. 911. *Engl. Fl.* vol. ii. p. 305.

12. ARENA'RIA.

Calyx inferior, of five oblong, pointed, permanent leaves. Petals five, egg-shaped or lance-shaped, undivided, withering. Nectaries five or ten glands at the base of the stamens. Filaments awl-shaped, five rather shorter. Anthers roundish. Germen egg-shaped, superior. Styles three, short, spreading. Stigmas downy. Capsule egg-shaped, covered by the calyx and corolla, one-celled, three-valved. Seeds numerous, kidney-shaped.

* *No stipules.*

A. peploides. Sea Sandwort. Leaves egg-shaped, acute, fleshy; leaves of the calyx obtuse, ribless.——Root extensively creeping. The whole plant smooth and succulent, with inconspicuous white flowers. Perennial: flowers in June and July: grows abundantly on the sea-coast in sandy and gravelly places. *Engl. Bot.* vol. iii. pl. 189. *Engl. Fl.* vol. ii. p. 306.

A. trinérvis. Plaintain-leaved Sandwort. Leaves egg-shaped, acute, three-ribbed, stalked; leaves of the calyx obscurely three-ribbed, with a rough keel.——Root small, tapering: stems weak, branching, about a foot high: leaves fringed, pale: flowers small, white. Annual: flowers in May and June: grows in woods and moist hedges. *Engl. Bot.* vol. xxi. pl. 1483. *Engl. Fl.* vol. ii. p. 307.

A. serpyllifólia. Thyme-leaved Sandwort. Leaves egg-shaped, nearly sessile, rough; leaves of the calyx hairy, the three outer five-ribbed.—— Stems spreading, forked in the upper part, round, rough with short hairs: flowers small, white, solitary, from the forks of the stem. Annual: flowers in July: grows on walls and in sandy and waste places; common. *Engl. Bot.* vol. xiii. pl. 923. *Engl. Fl.* vol. ii. p. 307.

A. tenuifólia. Fine-leaved Sandwort. Leaves awl-shaped, pointed; stem panicled; capsules erect; petals lance-shaped, shorter than the calyx.——Stems as in the last, about eight inches high: flowers very small, white. Annual: flowers in June: grows in dry fields and on walls; not common. *Engl. Bot.* vol. iv. pl. 219. *Engl. Fl.* vol. ii. p. 308.

A. vérna. Vernal Sandwort. Leaves awl-shaped bluntish; stem panicled; leaves of the calyx three-ribbed, longer than the petals.—— Stems numerous, ascending three or four inches long: flowers white.

Perennial: flowers in the summer months: grows in hilly pastures. *Engl. Bot.* vol. viii. pl. 512. *Engl. Fl.* vol. ii. p. 309.

A. rubélla. Little Red Sandwort. Leaves awl-shaped, bluntish; stems one-flowered; leaves of the calyx with three equal ribs, longer than the petals.——Stems very numerous, two or three inches high: petals reddish. Perennial: flowers in June: found on Ben Lawers by Mr. J. Mackay, and on Craig Chaillach by Dr. Greville. *Engl. Fl.* vol. ii. p. 310.

A. fastigiáta. Level-topped Sandwort. Leaves awl-shaped; stem erect, straight, corymbose; petals very short; lateral ribs of the calyx dilated.——Stems four or five inches high; flowers in crowded panicles: petals white, much shorter than the calyx. Annual: flowers in June: found on rocks on the mountains of Angus-shire and Fifeshire, by Mr. G. Don. *Engl. Bot.* vol. xxv. pl. 1744. *Engl. Fl.* vol. ii. p. 310.

* *Stipules membranous.*

A. rúbra. Purple Sandwort. Leaves linear, bristle-pointed; stipules membranous, sheathing; seeds compressed, angular, roughish.——Stems numerous, prostrate, branched, hairy towards the extremity: leaves opposite: flowers from the forks of the stem: calyx clammy, ribless, longer than the pale purple petals. Annual: flowers in July and August: grows in sandy fields and waste places; not uncommon. *Engl. Bot.* vol. xii. pl. 852. *Engl. Fl.* vol. ii. p. 311.

A. marina. Sea Sandwort. Leaves semicylindrical, fleshy, pointless; stipules membranous, sheathing; seeds compressed, bordered, smoothish.——Stems numerous, decumbent at the base: flowers rather large, with pale purple petals. Annual: flowers in June and July: grows on the sea-shore. *Engl. Bot.* vol. xiv. pl. 958. *Engl. Fl.* vol. ii. p. 312.

13. CHERLE'RIA.

Calyx inferior, of five lance-shaped, equal, permanent leaves. Petals none. Nectaries five minute glands, at the base of five of the stamens. Filaments awl-shaped. Anthers roundish. Germen oval, superior. Styles three, short. Stigmas obtuse. Capsule egg-shaped, one-celled, three-valved. Seeds numerous, angular.

C. sedoides.——Roots crowded: stems tufted: leaves oblong, keeled, minutely fringed, pale green: flowers yellowish-green. Perennial: flowers in July: grows near the summits of the higher mountains of Scotland. *Engl. Bot.* vol. xvii. pl. 1212. *Engl. Fl.* vol. ii. p. 313.

PENTAGYNIA.

14. COTYLE'DON.

Calyx inferior, of one leaf, with five acute segments. Corolla of one petal, bell-shaped, five-cleft. Nectaries a concave scale at the base of each germen. Filaments awl-shaped, straight, nearly as long as the corolla. Anthers roundish, two-lobed Germens five, oblong, each

terminating in an awl-shaped style, which is shorter than the corolla. Stigmas simple. Capsules five, oblong, pointed, one-valved. Seeds numerous, small.

C. Umbilicus. Common Navelwort. Leaves peltate, crenate; flowers clustered, drooping; bracteas entire; root tuberous.——Stem about six inches high, purplish: flowers pale yellow. Perennial: flowers in June and July: grows on rocks and old walls; rare. *Engl. Bot.* vol. v. pl. 325. *Engl. Fl.* vol. ii. p. 314.

C. latus. Greater Yellow Navelwort. Leaves deeply toothed, the lowest slightly peltate; flowers erect, root creeping.——Stem about a foot high: flowers deep yellow. Perennial: flowers in July: grows on rocks and old walls; very rare. *Engl. Bot.* vol. xxii. pl. 1522. *Engl. Fl.* vol. ii. p. 315.

15. SE'DUM.

Calyx inferior, of one leaf, deeply divided into five acute, permanent segments. Petals five, lance-shaped, spreading. Nectaries a minute notched scale at the base of each germen. Filaments awl-shaped, spreading, as long as the petals. Anthers roundish. Germens five, oblong, each tapering into a short style. Stigmas bluntish. Capsules five, compressed, pointed. Seeds numerous, minute.

* *Leaves flat.*

S. Telephium. Orpine, or *Live-long.* Leaves egg-shaped, flattish, serrate; corymbs leafy; stem erect.——Stems two feet high: leaves fleshy: flowers deep-red. Perennial: flowers in August: grows in the borders of fields, in hedges, and among rubbish. *Engl. Bot.* vol. xix. pl. 1319. *Engl. Fl.* vol. ii. p. 316.

** *Leaves rounded, attached by the base.*

S. dasyphy'llum. Thick-leaved White Stonecrop. Leaves egg-shaped, obtuse, fleshy; stems weak; panicles clammy.——Root fibrous, small: stems three or four inches high, rooting at the lower part: lower leaves crowded, opposite; upper scattered: petals white, with a red line in the middle. Perennial: flowers in June: grows on walls and rocks. *Engl. Bot.* vol. x. pl. 656. *Engl. Fl.* vol. ii. p. 317.

S. álbum. White Stonecrop. Leaves oblong, cylindrical, obtuse, spreading, smooth, panicle much branched, cymose.——Root fibrous, creeping: stems erect, four or five inches high, round, purplish: flowers numerous, with white petals. Perennial: flowers in July: grows on rocks, walls, and roofs; not common. *Engl. Bot.* vol. xxii. pl. 1578. *Engl. Fl.* vol. ii. p. 320.

S. villósum. Hairy Stonecrop. Leaves oblong, flattened, slightly hairy, as well as the flower-stalks; stem erect.——Root fibrous, small: stem from three to six inches high, spotted with red: leaves scattered: flowers rose-coloured or white, with a red central line. Perennial: flowers in June and July: grows in moist pastures in Scotland and the north of England. *Engl. Bot.* vol. vi. pl. 394. *Engl. Fl.* vol. ii. p. 319.

* *Leaves rounded; spurred at the base.*

S. ánglicum. White English Stonecrop. Leaves egg-shaped, thick, alternate; cyme of two branches.——Root fibrous: stems from two to four inches high: flowers white, spotted with red. Annual: flowers in July: grows in dry sterile places and on rocks; common in Scotland. *Engl. Bot.* vol. iii. pl. 171. *Engl. Fl.* vol. ii. p. 317.

S. ácre. Biting Stonecrop. Wall Pepper. Leaves egg-shaped, thick, tumid, alternate; cyme of the branches leafy.——Root fibrous: stems much branched, two or three inches high: flowers greenish-yellow. The whole plant is intensely acrid, but the acrimony is not perceived until it has been chewed for a little while: it is said to be useful in scrophula. Perennial: flowers in June: grows on rocks and walls; common. *Engl. Bot.* vol. xii. pl. 839. *Engl. Fl.* vol. ii. p. 318.

S. sexangulâre. Insipid Yellow Stonecrop. Leaves nearly cylindrical, obtuse, fleshy, in six or seven rows; cyme of three branches.——Root fibrous: stems branched, from two to five inches high: flowers yellow: larger than the last, and insipid. Perennial: flowers in July: grows on walls, and sandy grounds; common. *Engl. Bot.* vol. xxviii. pl. 1946. *Engl. Fl.* vol. ii. p. 318.

S. reflexum. Crooked Yellow Stonecrop. Leaves awl-shaped, scattered, the lower recurved; flowers cymose; segments of the calyx egg-shaped.——Root fibrous: stems rooting at the lower part: leaves tapering to a bristly point: flowers bright yellow, numerous. Perennial: flowers in July: grows on walls and roofs; common. *Engl. Bot.* vol. xxii. pl. 1578. *Engl. Fl.* vol. ii. p. 320.

S. glaúcum. Glaucous Yellow Stonecrop. Leaves awl-shaped, scattered, glaucous, those of the branches thread-shaped; flowers cymose; segments of the calyx lance-shaped.——Differs from the last in having more slender leaves and a more glaucous colour. Perennial: flowers in July and August: grows on walls and sandy ground. *Engl. Bot.* vol. xxxv. pl. 2477. *Engl. Fl.* vol. ii. p. 321.

S. rupéstre. Bristol Stonecrop. Leaves glaucous, those of the branches awl-shaped, erect, in five rows; flowers cymose; segments of the calyx elliptical.——Flowers yellow. Perennial: flowers in July: found on St. Vincent's Rocks at Bristol, and a few other places in England. *Engl. Bot.* vol. iii. pl. 170. *Engl. Fl.* vol. ii. p. 322.

S. Forsteriánum. Welsh Rock Stonecrop. Leaves of the branches semicylindrical, bluntish, pointed, in many rows; flowers cymose; segments of the calyx elliptical, obtuse.——Flowers yellow. Perennial: flowers in July: grows on rocks in Wales; rare. *Engl. Bot.* vol. xxvi. pl. 1802. *Engl. Fl.* vol. ii. p. 322.

16. O'XALIS.

Calyx inferior, deeply divided into five acute, permanent segments. Petals five, much longer than the calyx, obtuse, connected laterally by their claws. Filaments hair-like, erect, the five outer shorter. Anthers roundish. Germen superior, oblong, five-cornered. Styles five, thread-shaped. Stigmas obtuse, downy. Capsule membranous, five-cornered, five-celled. Seeds roundish, polished.

O. Acetosélla. Common Wood-Sorrel. Leaves all radical, ternate, inversely heart-shaped, hairy; scape single-flowered; root scaly.——Leaflets bright green, often purplish beneath: bracteas, two, opposite: petals white, streaked with purplish veins: the whole plant is intensely acid. Perennial: flowers in April and May: grows in woods and shady places; common. *Engl. Bot.* vol. xi. pl. 762. *Engl. Fl.* vol. ii. p. 323.

O. corniculáta. Yellow Procumbent Wood-Sorrel. Stem branched, procumbent; flowers in small umbels; stipules united to the base of the flower-stalks.——Root fibrous: stems spreading on the ground, often rooting: petals yellow, strongly combined. Annual: flowers from May to October: grows in shady waste ground. *Engl. Bot.* vol. xxiv. pl. 1726. *Engl. Fl.* vol. ii. p. 325.

17. AGROSTEMMA.

Calyx inferior, of one leaf, tubular, leathery, strongly ribbed, five-toothed, permanent. Petals five; the claws as long as the tube of the calyx, the border spreading. Filaments awl-shaped; five shorter. Anthers oblong, notched. Germen superior, egg-shaped. Styles thread-like, erect, as long as the stamens. Stigmas slender, downy. Capsule egg-shaped, one-celled, five-valved. Seeds numerous, kidney-shaped, granulated, stalked.

A. Githágo. Corn Cockle. Teeth of the calyx rising above the corolla; petals undivided, without teeth.——Stem from two to three feet high, covered with white hairs: leaves sessile, narrow lance-shaped: flowers large, with purple petals. Annual: flowers in June and July: grows among wheat; a troublesome weed. *Engl. Bot.* vol. xi. pl. 741. *Engl. Fl.* vol. ii. p. 325.

18. LYCHNIS.

Calyx inferior, of one leaf, oblong, membranous, ribbed, five-toothed, permanent. Petals five; the claws as long as the tube of the calyx, the border spreading. Filaments longer than the calyx, five of them later than the rest. Anthers oblong. Germen superior, nearly egg-shaped. Styles five, sometimes three or four, awl-shaped, longer than the stamens. Stigmas downy, reflected. Capsule egg-shaped, one-, three-, or five-celled. Seeds numerous, roundish, roughish.

L. Flos-Cúculi. Ragged Robin. Meadow Lychnis. Petals divided into four linear segments; capsule nearly globular, one-celled; stem rough with deflected bristles.——Stem erect, from one to two feet high, four-cornered, the upper part clammy: leaves lance-shaped: panicle terminal, forked, clammy: flowers rose-coloured. Perennial: flowers in June: grows in moist meadows; common. *Engl. Bot.* vol. viii. pl. 573. *Engl. Fl.* vol. ii. p. 326.

L. Viscária. Red German Catch-fly. Rock Lychnis. Petals slightly cleft: capsule five-celled, stalked; leaves fringed at the base.——Stems a foot high, four-cornered, smooth, clammy on the upper part: leaves narrow lance-shaped, with a slight woolly fringe at the base: petals rose-coloured, veined. Perennial: flowers in May and June: grows in rocky places; not frequent. *Engl. Bot.* vol. xi. pl. 788. *Engl. Fl.* vol. ii. p. 327.

L. alpina. Red Alpine Campion. Flowers densely corymbose; capsule five-celled, stalked; leaves narrow, lance-shaped, naked at the base.——Stem nearly a foot high, not clammy: flowers rose-coloured: the petals cleft, with two small protuberances at the base of the limb. Perennial: flowers in June and July: grows on rocks near the summits of the Clova mountains. *Engl. Bot.* vol. xxxii. pl. 2254. *Engl. Fl.* vol. ii. p. 328.

L. sylvéstris. Red Campion. Wood Lychnis. Flowers dioecious; petals cleft, crowned with four teeth; capsule one-celled, roundish; leaves egg-shaped, acute.——Stem from one to two feet high, slightly clammy: panicle terminal, many-flowered; petals thin, bright rose-coloured. Perennial: flowers in May and June: grows in woods, hedges, and shady waste places; common. *Engl. Bot.* vol. xxii. pl. 1579. *Engl. Fl.* vol. ii. p. 328. *L. dioica*, var. *α.*

L. vespertina. White Campion. Corn Lychnis. Flowers dioecious; petals cleft, crowned with four teeth; capsule one-celled, conical; leaves between oblong and lance-shaped.——Stem from eighteen inches to three feet high: panicle terminal, many-flowered; petals somewhat leathery, white. The flowers emit a pleasant odour in the evening. This and the preceding are considered by most botanists as forming only one species. Perennial: flowers from June to September: grows in corn-fields and waste places; not common. *Engl. Bot.* vol. xxii. pl. 1583. *Engl. Fl.* vol. ii. p. 328. *L. dioica*, var. *β.*

19. CERA'STIUM.

Calyx inferior, of five egg-shaped, acute, permanent leaves, membranous at the edges. Petals five, divided, obtuse, about the length of the calyx. Filaments thread-like, generally ten, sometimes five or four; alternate one shorter. Anthers roundish, two-lobed. Germen egg-shaped, superior, sessile. Styles five, rarely four only, short. Stigma bluntish, downy. Capsule thin, egg-shaped or cylindrical, one-celled. Seeds numerous, roundish, rough.

C. vulgátum. Broad-leaved Mouse-ear Chick-weed. Leaves egg-shaped, hairy; petals as long as the calyx; flowers longer than their stalks.——Root fibrous, small: stems numerous, from four to six inches long: leaves and stems hairy and pale-green: capsule twice as long as the calyx, cylindrical. Annual: flowers in the summer months: grows in fields and waste-ground; common. *Engl. Bot.* vol. xi. pl. 789. *Engl. Fl.* vol. ii. p. 330.

C. viscósum. Narrow-leaved Mouse-ear Chick-weed. Leaves between oblong and lance-shaped, hairy; flowers shorter than their stalks.——Roots fibrous, small: stems numerous, from four to eight inches long: leaves and stems hairy, dark-green and clammy. Perennial: flowers during the summer months: grows in fields and waste grounds; common. *Engl. Bot.* vol. xi. pl. 790. *Engl. Fl.* vol. ii. p. 331.

C. semidécandrum. Small Mouse-ear Chick-weed. Leaves egg-shaped, inclining to oblong; petals slightly cleft; stamens five.——Stem generally branched, spreading at the base, three or four inches high: leaves and stems hairy, very clammy, and generally covered with particles of sand and dust. Annual: flowers in April and May:

grows in sandy ground, and on walls; common. *Engl. Bot.* vol. xxiii. pl. 1630. *Engl. Fl.* vol. ii. p. 331.

C. tetrándrum. Tetrandrous Mouse-ear Chick-weed. Leaves broadly elliptical; petals four, inversely heart-shaped, shorter than the four-leaved calyx; stamens four.——Stems procumbent, from two to five inches long, forked: flower-stalks nearly thrice the length of the calyx: the whole plant hairy and somewhat clammy. Annual: flowers in May and June: grows in sandy pastures and waste grounds, and on walls; common. *Engl. Bot.* vol. iii. pl. 166: *Sagina cerastoides. Engl. Fl.* vol. ii. p. 332.

C. arvénse. Field Mouse-ear Chick-weed. Leaves narrow lance-shaped, fringed at the base; petals twice the length of the calyx.—— Roots creeping: stems numerous, covered with fine deflected hairs, from four inches to a foot high: leaves and stem hairy: panicles few-flowered: petals large, white. Perennial: flowers in the summer months: grows in fields and dry gravelly pastures. *Engl. Bot.* vol. ii. pl. 93. *Engl. Fl.* vol. ii. p. 333.

C. alpinum. Alpine Mouse-ear Chick-weed. Leaves elliptical, covered with long silky hairs, or nearly smooth; panicle few-flowered; capsule oblong, recurved.——Root creeping: stems three or four inches high, generally hairy: petals inversely heart-shaped, much longer than the calyx. Perennial: flowers in June and July: grows on the higher mountains of Scotland and Wales. *Engl. Bot.* vol. vii. pl. 472. *Engl. Fl.* vol. ii. p. 334.

C. latifólium. Broad-leaved Alpine Mouse-ear Chick-weed. Leaves between egg-shaped and elliptical, rough, with short bristly hairs; flowers terminal, generally solitary; capsule egg-shaped at the base. ——Stems three or four inches high, and, together with the leaves, covered with short, stiff hairs: capsule straight: petals inversely heart-shaped, much longer than the calyx. Perennial: flowers in June and July: grows on the higher mountains of Scotland and Wales. *Engl. Bot.* vol. vii. pl. 473. *Engl. Fl.* vol. ii. p. 234.

C. aquáticum. Water Mouse-ear Chick-weed. Leaves heart-shaped, sessile; flowers solitary; capsules drooping; petals deeply divided. ——Root creeping: stems weak, two feet long, branched, covered, as well as the leaves, with long hairs, and clammy at the upper part: petals about the same length as the calyx, white. *Engl. Bot.* vol. viii. pl. 538. *Engl. Fl.* vol. ii. p. 335.

20. SPE'RGULA.

Calyx inferior, of five egg-shaped, obtuse, permanent leaves, membranous at the edges. Petals five, egg-shaped, larger than the leaves of the calyx, undivided. Filaments ten, sometimes five, awl-shaped, shorter than the corolla. Anthers roundish, two-lobed. Germen superior, egg-shaped. Styles short, slender, spreading. Stigmas downy. Capsule egg-shaped, membranous, one-celled, five-valved. Seeds roundish, compressed.

S. arvénsis. Corn Spurrey. Leaves in whorls; stalks of the fruit reflected.—Root small, tapering: stems from six inches to a foot high, branched, swelling at the joints, hairy and clammy: leaves linear: stipules in pairs under each whorl: flowers in terminal panicles: petals

white: seeds with a membranous border. Annual: flowers in June and July: grows in corn-fields; abundant. *Engl. Bot.* vol. xxii. pl. 1536, *Engl. Fl.* vol. ii. p. 1337.

S. nodósa. Knotted Spurrey. Leaves opposite, awl-shaped, smooth, united at the base, the upper ones clustered; petals much longer than the calyx.——The whole plant smooth: stems decumbent or spreading, from three to six inches long, jointed: flowers large, white. *Engl. Bot.* vol. x. pl. 694. *Engl. Fl.* vol ii. p. 338.

S. saginoïdes. Smooth Awl-shaped Spurrey. Leaves awl-shaped, awnless, smooth; flower-stalks solitary, smooth, much longer than the leaves.——Root fibrous: the whole plant smooth: stems decumbent at the base, jointed: leaves united at the base: flowers white: seeds not bordered. Perennial: flowers in June: grows on the higher mountains in Scotland. *Engl. Bot.* vol. xxx. pl. 2105. *Engl. Fl.* vol. ii. p. 339.

S. subulàta. Fringed Awl-shaped Spurrey. Leaves opposite, awl-shaped, awned, fringed; flower-stalks solitary, much longer than the leaves, slightly hairy.——Leaves terminated by a long bristle: seeds encircled by a black line. Perennial: flowers in July and August: grows on sandy heaths. *Engl. Bot.* vol. xvi. pl. 1082. *Engl. Fl.* vol. ii. p. 339.

Class XI. DODECANDRIA.

Plants bearing Flowers with Twelve Stamens.

Order I. MONOGYNIA. *One Pistil.*

1. ASA'RUM. *Corolla* none. *Calyx* three-cleft, superior. *Capsule* six-celled.
2. LY'THRUM. *Petals* six. *Calyx* twelve-cleft, inferior.

Order II. DIGYNIA. *Two Pistils.*

3. AGRIMO'NIA. *Petals* five. *Calyx* five-cleft. *Seeds* in the bottom of the hardened calyx.

Order III. TRIGYNIA. *Three Pistils.*

4. RE'SEDA. *Petals* in many segments. *Capsule* one-celled, gaping.

Order IV. TETRAGYNIA. *Four Pistils.*

(Tormentilla officinalis.)

Order V. DODECAGYNIA. *Twelve Pistils.*

5. SEMPERVI'VUM. *Petals* twelve. *Calyx* with twelve divisions. *Capsules* twelve.

DODECANDRIA.—MONOGYNIA.

1. ASA'RUM.

Calyx superior, of one leaf, bell-shaped, leathery, coloured, permanent, in three deep segments. Corolla none. Filaments awl-shaped, half the length of the calyx. Anthers adnate, of two round, separated cells. Germen inferior, turbinate. Style thick, furrowed, nearly as long as the stamens. Stigma six-cleft, with recurved segments. Capsule leathery, six-celled, not bursting. Seeds several in each cell, inversely egg-shaped.

A europæ'um. Common Asarabacca. Leaves two on each stem, kidney-shaped, obtuse.——Roots creeping: stems very short, simple, round, each bearing two leaves, and a single flower, of a greenish-brown colour: filaments extending beyond the anthers. The powdered root acts as an emetic; the powder of the leaves occasions a discharge from the nostrils, without much sneezing, and forms the basis of cephalic snuffs. Perennial: flowers in May: grows in mountainous woods in the north of England. *Engl. Bot.* vol. xvi. pl. 1083. *Engl. Fl.* vol. ii. p. 342.

2. LY'THRUM.

Calyx inferior, of one leaf, cylindrical, with twelve marginal divisions, alternately smaller and larger. Petals six, oblong, equal, with short claws, inserted into the calyx. Filaments thread-like, shorter than the corolla, six alternate ones shorter. Anthers roundish, incumbent. Germen superior, oblong. Style thread-like, as long as the stamens, a little curved. Stigma knobbed. Capsule oblong, membranous, two-celled, pointed, inclosed in the tube of the calyx. Seeds numerous, oblong, minute.

L. Salicária. Spiked Purple Loose-strife. Leaves opposite, lance-shaped, heart-shaped at the base; flowers in whorled leafy spikes.——Stem erect, square, from two to four feet high: flowers purplish-red, forming a very beautiful showy spike. Perennial: flowers in July and August: grows in watery places. *Engl. Bot.* vol. xv. pl. 1061. *Engl. Fl.* vol. ii. p. 343.

L. hyssopifólium. Hyssop-leaved Purple Loose-strife. Grass-poly. Leaves alternate, narrow lance-shaped; flowers axillar, solitary; stamens six.——Stems decumbent, one of them erect: flowers small, pale purple. Annual: flowers in August: grows in watery places in England; not common. *Eng. Bot.* vol. v. pl. 292. *Eng. Fl.* vol. ii. p. 344.

DIGYNIA.

3. AGRIMO'NIA.

Calyx inferior, of one leaf, tubular, permanent, with five small marginal segments. Petals five, flat, notched. Filaments hair-like, shorter than the corolla, varying in number. Anthers small, two-lobed, compressed. Germens egg-shaped, compressed, in the bottom of the calyx. Styles as long as the stamens, lateral. Stigma obtuse,

undivided. Seeds generally two, egg-shaped, compressed, pointed, smooth, inclosed in the hardened tube of the calyx.

A. Eupatória. Common Agrimony. Stem-leaves pinnate, with oblong leaflets, the terminal one stalked; calyx bristly; spikes elongated. ——Root tapering: stems from one to two feet high, generally simple: flowers very numerous, yellow, in a close tapering spike, with divided bracteas. Perennial: flowers in June and July: grows by road-sides, and in hedges, and the margin of fields; common. This plant is slightly bitter, aromatic, and astringent, and was formerly in great repute for its medicinal properties. *Engl. Bot.* vol. xix. pl. 1335. *Engl. Fl.* vol. i. p. 346.

TRIGYNIA.

4. RESEDA.

Calyx inferior, of one leaf, deeply divided into several narrow, irregular, permanent segments. Petals three, four, five, or six, unequal, deciduous, variously jagged. Nectary a flat, erect, permanent coloured gland, between the uppermost petal and the stamens. Filaments variable in number, hair-like, drooping, short. Anthers oblong, erect. Germen superior, angular. Styles terminal, short. Stigmas obtuse. Capsule pitcher-shaped, angular, leathery, one-celled. Seeds numerous, kidney-shaped, stalked, on three lateral receptacles.

R. Lutéola. Wild Woad. Dyer's Weed. Yellow Weed. Leaves lance-shaped, undivided; calyx with four segments.——Stems two or three feet high, striated, smooth, branched: leaves frequently furnished with a small tooth on each side at the base: clusters terminal, erect, of numerous small flowers, with three greenish-white petals, of which the uppermost is variously lobed, the lateral ones of three acute lobes. Annual: flowers in July: grows in waste ground. This plant affords a beautiful yellow dye, and is cultivated for that purpose. *Engl. Bot.* vol. v. pl. 320. *Engl. Fl.* vol. ii. p. 347.

R. lútea. Rocket Yellow Weed. Base Rocket. Leaves deeply three-lobed, lower ones pinnatifid; calyx with six divisions.——Stem about two feet high, bushy, branched, striated, smooth: leaves somewhat stalked: clusters terminal, many-flowered, tapering: petals six, buff-coloured, variously lobed. Perennial: flowers in July and August: grows in waste places, abundantly. *Engl. Bot.* vol. v. pl. 321. *Engl. Fl.* vol. ii. p. 348.

DODECAGYNIA.

5. SEMPERVI'VUM.

Calyx inferior, of one leaf, deeply divided into several acute segments, permanent. Petals from six to twelve, corresponding to the segments of the calyx, somewhat larger, lance-shaped, acute, equal, withering. Filaments as many, or twice as many as the petals, awl-shaped, shorter than the corolla. Anthers of two round lobes. Ger-

mens as many as the stamens, ranged in a circle, oblong, pointed, compressed. Styles short, spreading. Stigma obtuse. Capsules oblong, compressed, pointed. Seeds numerous, minute, ranged along the inner margin on each side.

S. tectórum. Common Houseleek. Leaves fringed; offsets spreading.——Root fibrous, crowned with several dense tufts of numerous oblong, acute, fringed, very thick and succulent leaves: stem from the centre of one of the tufts, about a foot high, clothed with narrow, alternate, sessile leaves, and terminating in a cyme of large rose-coloured flowers. The leaves are said to be cooling, when applied externally, and frequently renewed. *Engl. Bot.* vol. xix. pl. 1320. *Engl. Fl.* vol. ii. p. 350.

Class XII. ICOSANDRIA.

Plants bearing Flowers with Twenty or more Stamens, arising from the inner edge of the Calyx.

Order I. MONOGYNIA. *From Two to Five Pistils.*

1. PRU'NUS. *Calyx* inferior, five-cleft. *Petals* five. *Nut* of the *Drupe* with slightly prominent seams.

(Mespilus Oxyacantha.)

Order II. DIGYNIA. *Two Pistils.*

2. MES'PILUS. *Calyx* superior, five-cleft. *Petals* five. *Apple* with from two to five hard one-valved capsules. *Seeds* two.
3. PY'RUS. *Calyx* superior, five-cleft. *Petals* five. *Apple* with from two to five membranous two-valved capsules. *Seeds* two.
4. SPIRÆ'A. *Calyx* inferior, five-cleft. *Petals* five. *Capsules* membranous, two-valved. *Seeds* numerous.

Order III. POLYGYNIA. *More than Five Pistils.*

5. RO'SA. *Calyx* five-cleft, the tube pitcher-shaped, finally pulpy, lined with hairs, and containing numerous bristly *seeds.*
6. RU'BUS. *Calyx* five-cleft. *Berry* superior, compound, deciduous. *Receptacle* spongy and permanent.
9. TORMENTI'LLA. *Calyx* eight-cleft. *Petals* four. *Seeds* naked. *Receptacle* dry.
11. DRY'AS. *Calyx* eight or ten-cleft. *Petals* five or eight. *Seeds* each with a long feathery tail.
10. GE'UM. *Calyx* ten-cleft. *Petals* five. *Seeds* each with a bent hooked tail. *Receptacle* dry, elongated.
7. FRAGA'RIA. *Calyx* ten-cleft. *Petals* five. *Seeds* naked, even, on the surface of a pulpy deciduous receptacle.
12. COMA'RUM. *Calyx* ten-cleft. *Petals* five. *Seeds* naked, even, on the surface of a spongy, hairy, permanent receptacle.
8. POTENTI'LLA. *Calyx* ten-cleft. *Petals* five. *Seeds* naked, rugged, fixed to a small dry receptacle.

(Spiræa Ulmaria and *Filipendula.)*

ICOSANDRIA.—MONOGYNIA.

1. PRU'NUS.

Calyx inferior, of one leaf, bell-shaped, deciduous, with five obtuse marginal segments. Petals five, roundish, spreading, larger than the segments of the calyx. Filaments awl-shaped, nearly as long as the corolla. Anthers short, two-lobed, round. Germen superior, roundish. Style thread-shaped, terminal, as long as the stamens. Stigma round. Drupe roundish. Nut very hard, one-celled, two-valved, the valves prominent at the margin. Kernel solitary, suspended from the top.

P. Pádus. Bird Cherry. Flowers in pendulous clusters; leaves inversely egg-shaped, deciduous, with two glands at the base beneath. ——A small tree with smooth branches; acute, doubly serrate leaves; beautiful clusters of white flowers, and small black harsh drupes. Flowers in May: grows in woods in Scotland and the north of England. *Engl. Bot.* vol. xx. pl. 1385. *Engl. Fl.* vol. ii. p. 354.

P. Cérasus. Wild Cherry. Gean-tree. Flowers in nearly sessile umbels; leaves broadly lance-shaped, somewhat downy beneath.——A tree, with very smooth bark; pointed, serrated leaves, with two unequal glands at the base; white flowers, and black, sweet drupes. Several varieties occur, differing chiefly in the colour of the fruit. Flowers in May: grows in woods. *Engl. Bot.* vol. x. pl. 706. *Engl. Fl.* vol. ii. p. 354.

P. insititia. Wild Bullace-tree. Flower-stalks in pairs; leaves between egg-shaped and lance-shaped, downy beneath; branches ending in a thorn.——A small tree, with spreading, round branches: leaves on small lateral branches, alternate, serrate: flowers on simple stalks, not much longer than the calyx: petals white: fruit globular, austere, black, with blue bloom. Flowers in April: grows in woods, thickets, and hedges. *Engl. Bot.* vol. xii. pl. 841. *Engl. Fl.* vol. ii. p. 356.

P. spinósa. Sloe-tree. Blackthorn. Flower-stalks generally single; leaves between elliptical and lance-shaped, smooth; branches ending in a thorn.——A small tree, or bush, with irregularly spreading round branches: leaves serrate: flowers very numerous, with pure white petals: fruit black with a bluish bloom, very austere. Flowers in March and April: grows in thickets, hedges, and on dry banks; common. *Engl. Bot.* vol. xii. pl. 842. *Engl. Fl.* vol. ii. p. 357

PENTAGYNIA.

2. ME'SPILUS.

Calyx superior, of one leaf, with five permanent segments. Petals five, round, from the edge of the calyx. Filaments awl-shaped, incurved. Anthers roundish, two-lobed. Germen inferior, roundish. Styles from two to five, thread-shaped, erect. Stigma knobbed. Apple globular, concave at the top, crowded with the calyx, with from two to five hard

cells or capsules, each one-valved. Seeds two in each cell, erect, inversely egg-shaped.

M. Oxyacántha. Hawthorn. Whitethorn. Branches thorny; leaves three or five lobed, serrate, smooth; flowers in terminal corymbs; styles generally two, often one.——A small tree or shrub, with smooth bark: thorns small, awl-shaped: flowers white, sometimes pink: fruit mealy, deep red. The wood is very hard: the flowers emit a very agreeable odour; and the berries which remain upon the branches during the winter are eaten by numerous species of small birds. Its value for hedges is well known. Flowers in May and June: grows in thickets and hedges. *Engl. Bot.* vol. xxxv. pl. 2504. *Engl. Fl.* vol. ii. p. 359.

M. germánica. Common Medlar. Leaves lance-shaped, somewhat downy; flowers solitary, nearly sessile, terminal; styles five.——Branches thorny: leaves alternate, entire, veined: flowers large with white undulated petals: fruit depressed, austere. A small tree: flowers in May: grows in hedges. *Engl. Bot.* vol. xxii. pl. 1523. *Engl. Fl.* vol. ii. p. 360.

M. Cotonéaster. Dwarf Quince-leaved Medlar. Leaves egg-shaped, entire, downy beneath; germen smooth; styles three or four.——A small bush, without thorns: flowers drooping, pale red: fruit red, mealy. Flowers in July: grows in Wales. *Engl. Fl.* vol. ii. p. 360.

3. PY'RUS.

Calyx superior, of one leaf, deeply divided into five permanent segments. Petals five, roundish, much larger than the calyx, and arising from its edge. Filaments awl-shaped, shorter than the corolla. Anthers oblong, two-lobed. Germen inferior, roundish. Styles from two to five, thread-shaped, as long as the stamens. Stigmas simple. Apple roundish or oblong, pitted at the top, fleshy, with as many bivalve membranous cells as there are styles. Seeds two in each cell, inversely egg-shaped, flattened on one side.

P. communis. Wild Pear-tree. Leaves simple egg-shaped, serrate; flower-stalks corymbose.——A tall tree with thorny branches; leaves serrate, smooth, downy when young: flower-stalks terminal, downy: flowers numerous, snow-white: fruit inversely egg-shaped, hard and austere. Flowers in April and May: grows in woods and hedges. *Engl. Bot.* vol. xxv. pl. 1784. *Engl. Fl.* vol. ii. p. 302.

P. Málus. Wild Apple-tree. Crab-tree. Leaves simple, serrate; flowers in a simple sessile umbel.——A small tree, with spreading irregular branches: flowers white, tinged with rose-colour. This is the original of all the varieties of the apple: the fruit is globular, yellowish, tinged with red, acid and harsh. Flowers in May: grows in woods and hedges. *Engl. Bot.* vol. iii. pl. 179. *Engl. Fl.* vol. ii. p. 363.

P. torminális. Wild Service-tree. Leaves simple, somewhat heart-shaped, serrate, seven-lobed; flower-stalks branched, corymbose.——A tree, with white flowers, in large terminal, downy panicles: fruit brown, acid. Flowers in April and May: grows in woods and hedges,

in the south of England. *Engl. Bot.* vol. v. pl. 298: *Cratægus terminalis. Engl. Fl.* vol. ii. p. 363.

P. doméstica. True Service-tree. Leaves pinnate, with uniform leaflets, downy beneath, and serrated towards the end; flowers panicled; fruit inversely egg-shaped.——A large tree, with cream-coloured flowers: fruit reddish, spotted, austere. Flowers in May: grows in mountainous woods in England; very rare. *Engl. Bot.* vol. v. pl. 350. *Engl. Fl.* vol. ii. p. 364.

P. Aucupária. Mountain Ash, Quicken, or *Roan-tree.* Leaves pinnate, with uniform, serrate, smooth leaflets; styles about three; fruit globular.——A beautiful tree, with smooth branches: panicles corymbose, with downy stalks: flowers numerous, white: fruit scarlet, acid and austere. The fruit is eaten by several species of small birds, especially of the thrush kind. A spirit has been distilled from them. *Engl. Bot.* vol. v. pl. 337: *Sorbus aucupária. Engl. Fl.* vol. ii. p. 365.

P. pinnatífida. Bastard Mountain Ash. Leaves deeply pinnatifid, downy beneath; flowers corymbose; styles about three.——A small tree, with smooth grey branches: leaves oblong, acute, serrate, white and cottony beneath: flowers cream-coloured. Flowers in May: found in the island of Arran, by Mr. J. Mackay. *Engl. Bot.* vol. xxxiii. pl. 2331. *Engl. Fl.* vol. ii. p. 366.

P. Aria, White-beam. Leaves simple, elliptical, cut, serrate, transversely furrowed, downy beneath; flowers corymbose; styles about two. ——A tree of moderate size, with smooth branches, the younger white and downy: flowers white, with downy stalks: fruit globular, scarlet, mealy, astringent. Flowers in May: grows in mountainous woods, and the fissures of rocks. *Engl. Bot.* vol. xxvi. pl. 1858. *Engl. Fl.* vol. ii. p. 366.

4. SPIRÆ'A.

Calyx inferior, of one leaf, with five acute, permanent, marginal segments. Petals five, roundish, or oblong. Filaments hair-like, nearly as long as the corolla. Anthers roundish, two-lobed. Germens five or more, superior, egg-shaped or oblong, compressed. Styles, one terminating each germen. Stigmas obtuse, spreading. Capsules as many as the germens, oblong, pointed, compressed, two-valved, one-celled. Seeds few, small, oblong.

S. salicifólia. Willow-leaved Spiræa. Leaves between elliptical and lance-shaped, unequally serrate, smooth; clusters terminal, compound. ——A shrub about four feet high, with smooth straight stems and branches: flowers pink, small, numerous, in terminal clusters: styles five. Flowers in July: grows in moist mountainous situations. *Engl. Bot.* vol. xxi. pl. 1468. *Engl. Fl.* vol. ii. p. 368.

S. Filipéndula. Common Dropwort. Leaves interruptedly pinnate, leaflets uniform, serrate; flowers cymose; stem herbaceous.——Root woody, with hard elliptical knobs: stem about a foot high, round, smooth, panicled at the top: leaves chiefly radical, spreading; panicle forked, with cream-coloured flowers, tinged with red externally. Perennial: flowers in July: grows in open pastures. *Engl. Bot.* vol. iv. pl. 284. *Engl. Fl.* vol. ii. p. 369.

S. Ulmária. Meadow Sweet. Leaves interruptedly pinnate, downy beneath, the terminal leaflet largest, and lobed; stem herbaceous; flowers cymose.——Root fibrous: stems from two to four feet high, angular, branched: flowers very numerous, cream-coloured, sweet-scented, in dense compound panicles. The whole plant is astringent; a decoction of it with copperas is used in the Hebrides for dyeing black. Perennial: flowers in June and July: grows in meadows, and about the edges of rivers and ditches. *Engl. Bot.* vol. xiv. pl. 960. *Engl. Fl.* vol. ii. p. 369.

POLYGYNIA.

5. RO'SA.

Calyx of one leaf, inferior, with a pitcher-shaped tube, contracted at the summit, permanent, and finally succulent, the limb deeply divided into five deep, lance-shaped, pointed segments, either all simple, or two of them with leafy appendages on both sides, one with appendages on one side only, and the other two naked on both sides. Petals five, inversely heart-shaped. Filaments thread-like, numerous, much shorter than the petals. Anthers roundish, flattened, two-lobed. Germens numerous, oblong, lining the tube of the calyx, interspersed with silky hairs. Styles, one to each germen, lateral. Stigmas obtuse. Fruit globular or egg-shaped, formed of the permanent, pulpy, coloured tube of the calyx, closed at the top. Seeds numerous, bristly, lining the calyx, and interspersed with hairs.

* *Branches covered with bristles. Prickles slender, nearly straight.*

R. rubélla. Red-fruited Dwarf Rose. Fruit globular; flower-stalks bristly; prickles of the stem straight, scattered; leaflets elliptical or roundish, smooth, generally with simple serratures.——Stem bushy, two or three feet high, round, branched, spreading, covered with very slender prickles, and glandular bristles: stipules glandular at the margin: leaflets from seven to eleven, paler beneath, smooth: petals white, tinged with pink: fruit bright scarlet. Flowers in July: grows on the sandy sea-coast. *Engl. Bot.* vol. xxxvi. pl. 3521. *Engl. Fl.* vol. ii. p. 375. *Brit. Fl.* p. 225.

R. spinosíssima. Burnet Rose. Fruit globular; flower-stalks and calyx nearly smooth; prickles of the stem straight, unequal, numerous, intermixed with glandular bristles; leaflets roundish, smooth, with simple serratures.——Stem bushy, two or three feet high, covered with numerous, unequal, straight, slender prickles, interspersed with glandular bristles: stipules fringed with glands: leaflets seven or nine, smooth: petals cream-coloured, yellow at the base: fruit purplish-black. Flowers in July: grows on sandy heaths and dry banks. *Engl. Bot.* vol. iii. pl. 1817. *Engl. Fl.* vol. ii. p. 376. *Brit. Fl.* p. 226.

R. involúta. Prickly Unexpanded Rose. Fruit globular, bristly: flower-stalks bristly; stem very prickly and bristly; leaflets elliptical, doubly and acutely serrate, their veins hairy beneath; petals involute.——Stem bushy, about three feet high, covered with innumerable

crowded, slender, very unequal, nearly straight prickles, intermixed with glandular bristles: stipules fringed with glands: leaflets five or seven: petals pale red. Flowers in June: found in various parts of Scotland. *Engl. Bot.* vol. xxix. pl. 2068. *Engl. Fl.* vol. ii. p. 379.

R. Doniána. Dwarf Hairy Rose. Fruit globular, bristly; flower-stalks bristly; stem prickly and bristly; leaflets elliptical, doubly and acutely serrate, hairy on both sides; petals spreading.——Stem from two to five feet high, less prickly than the last in its upper part: stipules glandular at the edge, leaflets five or seven: petals white. Flowers in June or July: found on the Clova mountains in Angus-shire, by Mr. G. Don. *Engl. Fl.* vol. ii. p. 379.

R. grácilis. Tall Bristly Rose. Fruit globular, bristly; flower-stalks usually in pairs, bristly; branches bristly; larger prickles curved, generally two together; leaflets doubly serrate, hairy on both sides.—— Stem eight or ten feet high, with dark brown branches, covered with numerous bristles and small straight prickles: stipules fringed with glands: leaflets seven or nine: petals pink, white at the base. Flowers in July: grows in thickets in the north of England. *Engl. Bot.* vol. ix. pl. 583: *R. villosa. Engl. Fl.* vol. ii. p. 380.

R. Sabini. Sabine's Rose. Fruit globular, bristly; flower-stalks and pinnated calyx bristly; prickles scattered, straightish; leaflets doubly serrate, nearly smooth, with hairy ribs.——Stem from five to eight feet high, with brown branches, covered with nearly straight prickles and glandular bristles: stipules finely glandular at the edges: leaflets five or seven, broadly elliptical: petals large, rose red: fruit scarlet. Flowers in July: grows in thickets in Scotland and the north of England. *Engl. Fl.* vol. ii. p. 381.

** *Branches destitute of bristles; prickles nearly straight.*

R. villósa. Soft-leaved Round-fruited Rose. Fruit globular, bristly; calyx slightly pinnate; prickles nearly straight; leaflets rounded, bluntish, downy all over.——Stem about six feet high, covered with scattered, slender, nearly straight prickles: stipules downy, thickly fringed with nearly sessile minute glands: leaflets five or seven, rounded: flowers pink: fruit scarlet. Flowers in July: grows in thickets, in Scotland, Wales, and the north of England. *Engl. Bot.* vol. xxxv. pl. 2459: *R. mollis. Engl. Fl.* vol. ii. p. 382. *Brit. Fl.* p. 230.

R. tamentósa. Downy-leaved Dog Rose. Fruit broadly elliptical, bristly; calyx copiously pinnate; prickles slightly curved; leaflets egg-shaped, acute, downy.——Stem from four to six feet high, branched, bristly, with round prickly branches: prickles slender, awl-shaped: stipules linear, downy, densely fringed with glands: leaflets five or seven, with double serratures: petals pink, white in the lower half: fruit scarlet, sometimes smooth. Flowers in June and July: grows in hedges and thickets: abundant in the outer Hebrides. *Engl. Bot.* vol. xiv. pl. 990. *Engl. Fl.* vol. ii. p. 384. *Brit. Fl.* p. 281.

*** *Branches destitute of bristles; prickles hooked, compressed; styles distinct.*

R. Sherardi. Round-headed Rose. Fruit globular, abrupt, somewhat bristly; calyx copiously pinnate; prickles conical, hooked, compressed;

aflets elliptical, acute, downy on both sides.——Stem about six feet igh, with stout round branches, covered with conical, hooked prickles: tipules acute, downy, fringed with glands: leaflets five or seven, ellipical, hoary and downy on both sides: petals rose-coloured. Flowers n June and July: grows in hedges and thickets, in various parts of ngland. *Engl. Fl.* vol. i. p. 385.

R. rubiginósa. Eglantine. Sweet-briar. Fruit inversely egg-shaped, ristly towards the base; calyx pinnate; prickles hooked, compressed, vith smaller straighter ones interspersed; leaflets elliptical, doubly errate, hairy, covered beneath with rust-coloured glands.——Stem ushy, about four feet high: prickles scattered, hooked, conical, interpersed with others of a smaller size: stipules narrow lance-shaped, losely fringed with glands, as are the leaflets: petals bright pink: ruit scarlet. Flowers in June and July: grows in dry bushy places; ot common. *Engl. Bot.* vol. xiv. pl. 991. *Engl. Fl.* vol. i. p. 386.

R. cæ'sia. Glaucous-leaved Rose. Fruit elliptical, smooth; flowerstalks smooth, solitary; calyx distantly pinnate; prickles hooked, uniform; leaflets elliptical, doubly serrate, glaucous, hairy beneath, without glands.——Stem bristly, four or five feet high: stipules oblong, acute, fringed with glands: leaflets five or seven: flowers pale pink, sometimes white. Flowers in July: grows in some of the Highland valleys of Scotland; rare. *Engl. Bot.* vol. xxxiii. pl. 2367. *Engl. Fl.* vol. ii. p. 390. *Brit. Fl.* p. 239.

R. canina. Common Dog Rose. Fruit egg-shaped, smooth, or somewhat bristly, calyx pinnate; prickles strongly hooked; leaflets simply or doubly serrate, pointed, smooth above, more or less downy beneath.——Stem from four to eight feet high: leaflets generally seven, destitute of glands: fruit scarlet. This species varies so much that it has been formed into several. The fruit is made into a conserve, and also furnishes food to small birds. Flowers in June and July: grows in hedges and thickets; common. *Engl. Bot.* vol. xiv. pl. 991. *Engl. Fl.* vol. ii. p. 396. *Brit. Fl.* p. 236.

*** *Branches destitute of bristles; prickles hooked, compressed; styles united.*

R. systy'la. Close-styled Dog Rose. Fruit oblong, smooth; calyx pinnate; prickles hooked; leaflets simply serrate; receptacle of the flower conical; styles united into a prominent, furrowed column.——A slender shrub, from eight to twelve feet high: prickles with a large base: leaflets five or seven, smooth above, hairy on the ribs beneath: flowers pale pink: fruit scarlet: flowers in June and July: grows in thickets and hedges. *Engl. Fl.* vol. ii. p. 396. *Engl. Bot.* vol. xxvii. pl. 1895. *Brit. Fl.* p. 240.

R. arvénsis. White Field Rose. Fruit globular or oblong, smooth; calyx pinnate; prickles hooked, scattered; leaflets simply serrate, glaucous beneath; receptacle of the flower convex; styles united.——A bush four or five feet high: leaflets five or seven, egg-shaped, very glaucous beneath: petals white, with a yellow base: fruit scarlet: flowers in July: grows in hedges, thickets, and the borders of fields. *Engl. Bot.* vol. iii. pl. 188. *Engl. Fl.* vol. ii. p. 397. *Brit. Fl.* p. 241.

6. RU'BUS.

Calyx inferior, of one leaf, with five oblong, spreading, permanent

segments. Petals five, round, as long as the calyx. Filaments hair-like, shorter than the petals. Anthers roundish, flattened, two-lobed. Germens numerous, globular, crowded closely together into a round head. Styles one to each germen, small, hair-like, lateral. Stigmas simple, permanent. Berry compound, globular, concave, deciduous, of several round, juicy grains, upon a conical, spongy receptacle. Seeds solitary, oblong.

* *Stem woody, round.*

R. idæ'us. Raspberry Bush. Leaves pinnate, with five or three leaflets, white and downy beneath; stem erect, prickly; leaf-stalks channelled.——Stems biennial, nearly erect, three or four feet high, branched, with small, straight, slender prickles: leaflets five, the terminal one larger, their stalks downy and prickly: flowers small, white, pendulous, in simple clusters: fruit pale-scarlet, fragrant, with an agreeable slightly acid taste, not improved by culture, excepting as to size: flowers in May and June: grows in woods and thickets, in dry stony or gravelly places; common. *Engl. Bot.* vol. xxxiv. pl. 2442. *Engl. Fl.* vol. ii. p. 409.

R. cæsius. Blue Bramble. Dew-berry Bush. Leaves ternate, hairy beneath, the lateral leaflets lobed externally; stems prostrate, glaucous, prickly and bristly; calyx embracing the fruit.——Stems weak, with numerous deflected, unequal, slender prickles: leaflets egg-shaped, acute, doubly serrate, downy beneath: panicles corymbose: petals white or pale rose-coloured: fruit large-grained black, with a bluish bloom, and of an agreeable acid taste: flowers in June and July: grows in woods, thickets, hedges, and the borders of fields. *Engl. Bot.* vol. xii. pl. 826. *Engl. Fl.* vol. ii. p. 410.

R. corylifo'lius. Hazel-leaved Bramble. Leaves pinnate with five or three roundish leaflets, hairy beneath; stems spreading; prickles scattered, straight, deflected; calyx reflected; panicle minutely glandular.——Stems biennial, with scattered prickles; not confined to the angles: leaflets broadly egg-shaped, somewhat heart-shaped, pointed, sharply serrate, resembling the leaves of the hazel, soft and minutely hairy: flowers large, white: fruit large, large-grained, brownish-black, agreeably acid: flowers in July: grows in hedges and thickets; common. *Engl. Bot.* vol. xii. pl. 827. *Engl. Fl.* vol. ii. p. 409.

* *Stem woody, angular.*

R. fruticósus. Common Bramble. Leaves pinnate, with five stalked leaflets, hoary beneath; prickles hooked, growing upon the angles of the stem; panicle compound; calyx reflected.——Stems strongly angular, with numerous sharp, strongly hooked prickles growing on the angles: leaflets egg-shaped, acute, sharply serrated, smoothish above, white and downy beneath: flowers in erect clusters: petals white, or tinged with pink: fruit of very numerous purplish-black grains, with a sweetish flavour, but somewhat nauseating when eaten in large quantities: flowers in July and August: grows in woods, thickets, and hedges; common. *Engl. Bot.* vol. x. pl. 715. *Engl. Fl.* vol. ii. p. 400.

R. rhamnifólius. Buckthorn-leaved Bramble. Leaves digitate, of five roundish, pointed, shortly-stalked leaflets, paler beneath; prickles straight, deflected; panicle twice compound; calyx spreading.——Stems angular, smooth, or with scattered hairs: prickles chiefly on the angles: leaflets egg-shaped, or roundish, nearly smooth above, bright green: fruit black. Flowers in July and August: grows in hedges and thickets; not uncommon. *Engl. Bot. Suppl.* pl. 2504. *Engl. Fl.* vol. ii. p. 402. *Brit. Fl.* p. 245.

R. leucostáchys. Long-clustered Bramble. Leaves digitate, of five roundish, shortly-stalked, leathery leaflets, hoary beneath; prickles deflected, slightly hooked; panicle cylindrical, minutely glandular; calyx reflected.——Stems angular, smooth, dark red: leaflets roundish or heart-shaped, unequally serrate: panicle nearly simple, narrow: fruit black. Flowers in July and August: grows in hedges and thickets, in Essex, Sussex, and Hampshire. *Engl. Fl.* vol. ii. p. 404. *Linde. Syn.* p. 93.

R. glandulósus. Glandular Bramble. Leaves pinnate, with five or three leaflets, downy beneath; prickles unequal, deflected, partly hooked; panicle and calyx very prickly and hairy, with numerous glandular bristles.——Stems angular, covered with numerous scattered prickles: leaflets smooth above, downy beneath: flower-stalks covered with numerous, partly hooked prickles, long hairs, and glandular bristles: petals white: fruit black, with numerous grains: flowers in July and August: grows in woods, thickets, and hedges, in various parts of England. *Engl. Fl.* vol. ii. p. 404. *Engl. Bot. Suppl.* pl. 2605. *Brit. Fl.* p. 247: *R. Koehleri.*

R. suberéctus. Red-fruited Bramble. Leaves pinnate, with five, three, or seven broadly egg-shaped, pointed leaflets, minutely hairy beneath; prickles deflected; clusters simple, hairy, prickly; calyx slightly hairy.——Stems somewhat erect, with scattered, slightly hooked prickles: calyx densely hairy, destitute of prickles: petals white, crumpled: fruit deep red, of few grains, agreeably acid: flowers in July and August: grows in woods and thickets. *Engl. Bot.* vol. xxxvi. pl. 2572. *Engl. Fl.* vol. ii. p. 407.

*** *Stems herbaceous.*

R. saxátilis. Stone Bramble. Leaves ternate, slightly downy; stems ascending, with prostrate runners; panicle few-flowered.——Stem slender, about eight inches high: leaves two or three, with egg-shaped leaflets; petals minute, greenish-white: fruit of two or three large crimson grains. Perennial: flowers in June: grows in stony mountainous woods. *Engl. Bot.* vol. xxxii. pl. 2233. *Engl. Fl.* vol. ii. p. 411.

R. árcticus. Arctic Bramble. Leaves ternate, smooth, obtusely serrate; stem destitute of prickles; flower solitary, with roundish, notched petals.——Stems erect, three or four inches high, angular: leaves three or four, with strongly ribbed leaflets: flower deep rose-colour: fruit of several large grains, purplish-red. Perennial: flowers in June: found by Dr. Walker, in the Isle of Mull. *Engl. Bot.* vol. xxiii. pl. 1585. *Engl. Fl.* vol. ii. p. 412.

R. Chamæmorus. Mountain Bramble. Cloud-berry. Leaves simple, plaited, lobed; stem one-flowered, destitute of prickles.——Stem simple, downy, about six inches high: leaves heart-shaped, five-lobed,

acutely serrate, stalked: petals white: fruit large, of few grains, dull orange-red, watery. Perennial: flowers in June: grows on peaty soil in mountainous situations, in Scotland, Wales, and the north of England. *Engl. Bot.* vol. x. pl. 716. *Engl. Fl.* vol. ii. p. 413.

7. FRAGA'RIA.

Calyx inferior, of one leaf, with ten segments, of which five alternate ones are external and smaller. Petals five, roundish, spreading. Filaments awl-shaped, erect, shorter than the corolla. Anthers roundish, two-celled. Germens superior, numerous, roundish, collected into a round head. Styles one to each germen, lateral, incurved, short. Stigmas obtuse. Berry formed of the enlarged receptacle of the seeds, pulpy, coloured, roundish. Seeds numerous, naked, upon the surface of the fruit.

F. vésca. Wood Strawberry. Calyx of the fruit reflected; hairs of the leaf-stalks spreading, those of the partial flower-stalks close-pressed, silky.——Root somewhat woody, sending out long runners, which take root and propagate the plant: stems four or five inches high, erect, panicled at the top: flowers erect, with small white petals: fruit drooping, scarlet, somewhat acid and fragrant. This is the origin of the cultivated strawberry. Perennial: grows in woods and thickets, and on dry banks. *Engl. Bot.* vol. xxii. pl. 1584. *Engl. Fl.* vol. ii. p. 415.

8. POTENTI'LLA.

Calyx inferior, of one leaf, with ten segments, of which five alternate ones are external and narrower. Petals five, roundish, spreading. Filaments awl-shaped, erect, shorter than the corolla. Anthers roundish, two-celled. Germens superior, numerous, roundish, collected into a round head. Styles one to each germen, thread-shaped, lateral, ascending. Stigmas bluntish, downy. Seeds numerous, naked, roundish, upon the surface of a small, dry, globular receptacle.

* *Leaves pinnate.*

P. fruticósa. Shrubby Cinquefoil. Leaves pinnate; stem woody.——Stem three or four feet high: leaves of five acute, oblong, leaflets, covered with close hairs, paler beneath: the upper leaves ternate: flowers terminal, large, golden yellow. Perennial: flowers in June: grows in mountainous thickets in several places in Teesdale. *Engl. Bot.* vol. ii. pl. 88. *Engl. Fl.* vol. ii. p. 417.

P. anserina. Silver-weed. Goose-grass. Wild Tansy. Leaves interruptedly pinnate, serrate, silky; stem creeping; stalks axillar, solitary, one-flowered.——Root long, cylindrical: leaves interruptedly pinnate, covered beneath with shining white hairs: flowers large, bright yellow. Perennial: flowers in June and July: grows by the sides of roads and ditches, and in meadows and pastures. The roots are eaten in the Hebrides, either raw or boiled. *Engl. Bot.* vol. xii. pl. 861. *Engl. Fl.* vol. ii. p. 418.

P. rupéstris. Rock Cinquefoil. Leaves pinnate with the terminal leaflet large; leaflets egg-shaped, serrate, hairy; stem erect.——

Root somewhat woody, tapering: stem a foot high, erect, hairy: lower leaves with seven leaflets, upper with three: flowers large, white, panicled. Perennial: flowers in June: grows on the side of a hill, called Craig Breddin, in Montgomeryshire. *Engl. Bot.* vol. xxix. pl. 2058. *Engl. Fl.* vol. ii. p. 418.

** *Leaves fingered.*

P. argéntea. Silvery or *Hoary Cinquefoil.* Leaflets five, wedge-shaped, jagged, downy beneath; stem ascending,——Stems nearly erect, from six to twelve inches high, cottony: leaves stalked, cottony beneath: flowers small, yellow, in a corymbose panicle, with cottony branches: seeds numerous, small, smooth. Perennial: flowers in June and July: grows in gravelly pastures. *Engl. Bot.* vol. ii. pl. 89. *Engl. Fl.* vol. ii. p. 419.

P. alpéstris. Orange Alpine Cinquefoil. Root-leaves of five wedge-shaped, somewhat hairy, leaflets, deeply cut in their upper half; upper stipules egg-shaped; petals heart-shaped; stems ascending,——Root somewhat woody: stems numerous, decumbent at the base, ascending, from four to eight inches long: root-leaves on long, hairy stalks: calyx hairy: petals inversely heart-shaped, orange-yellow. Perennial: flowers in July: grows on mountains in Scotland, the north of England, and Wales. *Engl. Bot.* vol. viii. pl. 561: *P. aurea. Engl. Fl.* vol. ii. p. 419.

P. vérna. Spring Cinquefoil. Root-leaves of five or seven wedge-shaped, partly serrated leaflets, bristly at the margins and on the ribs beneath; upper stipules dilated, hairy; stems procumbent.——Roots woody, creeping: stems spreading on the ground, hairy: root-leaves on longish hairy stalks: calyx very hairy: petals somewhat heart-shaped, bright yellow. Perennial: flowers in April and May: grows in elevated dry pastures. *Engl. Bot.* vol. i. pl. 37. *Engl. Fl.* vol. ii. p. 421.

P. opáca. Saw-leaved Hairy Cinquefoil. Root-leaves of seven hairy, narrow wedge-shaped leaflets, deeply serrate throughout; stem-leaves ternate; petals heart-shaped; stems slender, decumbent.——Roots woody: stems hairy: root-leaves on long hairy stalks: calyx hairy: petals about the length of the calyx, bright-yellow, orange at the base. Perennial: flowers in June: found by Mr. G. Don on the Clova mountains and in Perthshire. *Engl. Bot.* vol. xxxv. pl. 2449. *Engl. Fl.* vol. ii. p. 422.

P. réptans. Common Creeping Cinquefoil. Leaflets five, inversely egg-shaped, serrate: stem creeping; stalks axillar, one-flowered.——Root tapering: stems long, prostrate, rooting: leaves opposite, on longish, hairy stalks: calyx hairy: petals bright yellow. Perennial: flowers from June to September: grows by road-sides and in pastures. *Engl. Bot.* vol. xii. pl. 862. *Engl. Fl.* vol. ii. p. 424.

P. álba. White Cinquefoil. Root-leaves of five oblong leaflets, serrate at the end, silky beneath; stems thread-shaped, procumbent; receptacle very hairy.——Root woody: root-leaves on long hairy stalks: leaflets five, silky, and silvery beneath: calyx silky: petals white. Perennial: flowers in June and July: grows in mountainous woods; found in Wales by Mr. Heaviland. *Engl. Bot.* vol. xx. pl. 1394. *Eng. Fl.* vol. ii. p. 423.

** *Leaves ternate.*

P. tridentáta. Three-toothed Cinquefoil. Leaves ternate; leaflets wedge-shaped, with three terminal teeth, smooth above, hairy beneath; stem panicled, erect.——Root woody, creeping: stems three or four inches high, round, hairy: leaves all ternate: petals inversely egg-shaped, white. Perennial: flowers in June: found by Mr. G. Don on Werron Hill, and the East Rocks of Clova. *Engl. Bot.* vol. xxxiv. pl. 2389. *Engl. Fl.* vol. ii. p. 425.

P. Fragária. Barren Strawberry. Leaves ternate, leaflets inversely egg-shaped, deeply serrate, silky on both sides; stems prostrate.——Root woody: the whole plant is hairy: and presents all the characters of the strawberry, excepting in the fruit, which is small, dry, and hairy: petals inversely heart-shaped, white. Perennial: flowers in March and April: grows in woods and on dry banks. *Engl. Bot.* vol. xxv. pl. 1785: *Fragaria sterilis. Engl. Fl.* vol. ii. p. 426. *Brit. Fl.* p. 253: *P. Fragariastrum.*

9. TORMENTI'LLA.

Calyx inferior, of one leaf, the limb divided into eight deep segments, four alternate ones of which are external and narrower. Petals four, inversely heart-shaped. Filaments awl-shaped, erect, not half so long as the corolla. Anthers roundish, erect, two-celled. Germens superior, about eight, roundish, small, collected into a round head. Styles thread-shaped, erect, short, one to each germen, lateral. Stigmas obtuse. Seeds egg-shaped, smooth. Receptacle small, depressed, hairy.

T. officinális. Common Tormentil Septfoil. Stem ascending, branched; leaves nearly sessile.——Root woody, large: stems slender, procumbent at the base: leaves ternate: leaflets oblong, deeply serrate, acute: calyx ribbed, hairy: petals bright yellow. The root of this plant is used very extensively in the Hebrides for tanning. From its astringent quality, it is also employed as a gargle in enlarged tonsils and other diseases of the throat. Perennial: flowers in June and July: grows in pastures, heaths, and woods. *Engl. Bot.* vol. xii. pl. 863. *Engl. Fl.* vol. ii. p. 428.

T. réptans. Trailing Tormentil. Stem prostrate: scarcely branched, leaves stalked.——Root woody: stems about two feet long: leaves ternate or quinate: leaflets inversely egg-shaped, hairy, deeply serrate: calyx ribbed, hairy: petals bright yellow, larger than in the last species, of which some have taken this as a variety. Both species have occasionally five petals, and ten segments to the calyx. Perennial: flowers in June and July: grows in woods and barren pastures; not common. *Engl. Bot.* vol. xii. pl. 864. *Engl. Fl.* vol. ii. p. 428.

10. GE'UM.

Calyx inferior, of one leaf, the limb deeply divided into ten acute segments, of which five alternate ones are much smaller. Petals five, rounded, undivided or cleft, as long as the calyx. Filaments

awl-shaped, shorter than the corolla. Anthers short, roundish, two-celled. Germens superior, egg-shaped, compressed, numerous, collected into a round head. Styles long, lateral, with a joint above the middle, one to each germen. Stigmas simple. Seeds egg-shaped, compressed, hairy. Receptacle cylindrical, dry, hairy.

G. urbánum. Common Avens. Herb Bennet. Leaves ternate, root-leaves somewhat lyrate; flowers erect; styles naked.——Root of large fibres: stems erect, two feet high, round, branched at the upper part: root-leaves on long stalks, interruptedly pinnate, with a large rounded terminal leaflet: stem-leaves ternate, stalked; uppermost leaves simple, three-lobed: flowers terminal, solitary, stalked, with yellow petals: styles curved. A variety occurs, intermediate between this and the next species. The roots, gathered in the spring, and put into ale, give it a pleasant flavour. Perennial: flowers from May to September: grows in woods, hedges, and waste places; common. *Engl. Bot.* vol. xx. pl. 1400. *Engl. Fl.* vol. ii. p. 430.

G. rivále. Water Avens. Root-leaves interruptedly pinnate, somewhat lyrate; flowers drooping; styles hairy.——Root somewhat woody, creeping: stem nearly a foot high, slightly panicled: root-leaves stalked, the terminal lobe very large, rounded, lobed and crenate: stem-leaves ternate or three-lobed: flowers drooping: calyx purplish-brown: petals erect, cleft, yellowish-brown. The root is astringent and aromatic. Perennial: flowers in June and July: grows in moist meadows and woods, and by ditches and streams. *Engl. Bot.* vol. ii. pl. 106. *Engl. Fl.* vol. ii. p. 431.

11. DRY'AS.

Calyx inferior, of one leaf, flat, permanent, the limb deeply divided into eight or ten permanent segments. Petals eight, sometimes ten, roundish, undivided, longer than the calyx. Filaments hair-like, much shorter than the corolla. Anthers small, roundish, two-lobed. Germens numerous, small, oblong. Styles hair-like, long, straight. Stigmas simple, smooth. Seeds oblong, hairy, each with a very long, hairy, lateral tail. Receptacle depressed, downy.

D. octopétala. Mountain Avens. Petals eight; leaves simple, downy beneath.——Roots woody: stems erect, somewhat woody: leaves stalked, evergreen, egg-shaped, serrate, cottony beneath: flowers large, solitary, white: styles feathery. Perennial: flowers in June: grows on the mountains of Scotland and the north of England. *Engl. Bot.* vol. vii. pl. 451. *Engl. Fl.* vol. ii. p. 432.

12. COMA'RUM.

Calyx inferior, of one leaf, coloured, permanent, the limb divided into ten deep, acute, spreading segments, of which five alternate ones are external and much smaller. Petals five, less than the small segments of the corolla, lance-shaped, acute. Filaments awl-shaped, erect, nearly as long as the corolla. Anthers roundish, two-celled. Germens numerous, small, egg-shaped, collected into a head. Styles

simple, short, straight, lateral. Stigmas simple. Seeds numerous, naked, egg-shaped, upon a large, dry, hairy, permanent receptacle.

C. palustre. Marsh Cinquefoil.——Root creeping: stems ascending, round, panicled in the upper part, about a foot high: lowest leaves stalked, of five or seven oblong, acute, serrate leaflets, downy and whitish beneath: the upper ternate, nearly sessile: flowers on panicled, downy stalks: calyx large, dark purple: petals very small, purplish. Perennial: flowers in June and July: grows in boggy places. *Engl. Bot.* vol. iii. pl. 172. *Engl. Fl.* vol. ii. p. 434.

Class XIII. POLYANDRIA.

Plants bearing Flowers with numerous Stamens, arising from the receptacle.

Order I. MONOGYNIA. *One Pistil.*

* *Petals four.*

4. PAPA'VER. *Calyx* two-leaved, caducous. *Capsule* one-celled, opening by pores under the stigma.
2. CHELIDO'NIUM. *Calyx* two-leaved, caducous. *Pod* linear, one-celled.
3. GLAU'CIUM. *Calyx* two-leaved, caducous. *Pod* linear, with two or three cells.
1. ACTÆ'A. *Calyx* four-leaved, caducous. *Berry* one-celled.

** *Petals five.*

8. CI'STUS. *Calyx* of five leaves, two of them smaller. *Capsule* of several valves. *Seeds* numerous.
7. TI'LIA. *Calyx* of one leaf, with five deep, equal segments, deciduous. *Capsule* five-celled, without valves.

(Delphinium Consolida.)

*** *Petals numerous.*

5. NYMPHÆ'A. *Calyx* of four or five leaves, larger than the petals. *Petals* numerous, seated upon the germen. *Berry* many-celled, many-seeded.
6. NU'PHAR. *Calyx* of five or six leaves, much larger than the petals. *Petals* numerous, seated upon the receptacle. *Berry* many-celled, many-seeded.

Order II. PENTAGYNIA. *From Two to Six Pistils.*

9. PÆ'ONIA. *Calyx* five-leaved. *Petals* five. *Styles* none. *Follicle* with many seeds.
10. DELPHI'NIUM. *Calyx* none. *Petals* five, the upper one spurred. *Nectary* divided, tubular, sessile, in the spur.

11. ACONI'TUM. *Calyx* none. *Petals* five, the upper one hooded. *Nectaries* two, recurved, stalked, under the hood.
12. AQUILE'GIA. *Calyx* none. *Petals* five, equal. *Nectaries* five, spurred below.
13. STRATI'OTES. *Calyx* three-cleft. *Petals* three. *Berry* inferior, angular, six-celled.

(*Reseda Luteola. Helleborus viridis* and *fœtidus.*)

Order III. POLYGYNIA. *Numerous Pistils.*

16. THALI'CTRUM. *Calyx* none. *Petals* four or five. *Seeds* numerous, without appendage.
15. CLE'MATIS. *Calyx* none. *Petals* from four to eight. *Seeds* numerous, with a tail.
14. ANEMO'NE. *Calyx* none. *Petals* five or more. *Seeds* numerous.
21. HELLE'BORUS. *Calyx* none. *Petals* five, permanent. *Nectaries* tubular. *Follicles* few.
22. CA'LTHA. *Calyx* none. *Petals* five or more. *Nectaries* none. *Follicles* from five to ten.
20. TRO'LLIUS. *Calyx* none. *Petals* five or more. *Nectaries* five or more, flattened. *Follicles* numerous.
18. FICA'RIA. *Calyx* three-leaved. *Petals* about ten, with a nectariferous scale at the base. *Seeds* numerous, naked.
19. RANUNCULUS. *Calyx* five-leaved. *Petals* five, with a nectariferous pore or scale at the base. *Seeds* numerous, naked.
17. ADONIS. *Calyx* five-leaved. *Petals* from five to ten. *Nectary* one. *Seeds* numerous, naked.

POLYANDRIA.—MONOGYNIA.

1. ACTÆ'A.

Calyx inferior, of four circular, obtuse, caducous leaves. Petals four, oblong, clawed, deciduous. Filaments about thirty, hair-like, broader towards the top. Anthers roundish, two-lobed. Germen egg-shaped. Style none. Stigma thickish, obliquely depressed. Berry globular, smooth, with a lateral furrow, one-celled, not bursting. Seeds numerous, half-globular, arranged in two rows.

A. spicáta. Herb Christopher. Bane Berry. Cluster egg-shaped; petals as long as the stamens.——Root creeping: stem triangular, from one to two feet high, slightly branched, leafy, smooth: leaves twice or thrice ternate: leaflets egg-shaped, acutely serrate, deep green: flowers in a close cluster, with white petals: berries purplish-black, poisonous. The fetid odour of this plant is said to attract toads to it. Perennial: flowers in May and June: grows in woods and shady places, in Yorkshire. *Engl. Bot.* vol. xiii. pl. 918. *Engl. Fl.* vol. iii. p. 3.

2. CHELIDO'NIUM.

Calyx inferior, of two roundish caducous leaves. Petals four, equal, roundish, flat, narrower at the base. Filaments about thirty, flat, broader

upwards, shorter than the corolla. Anthers oblong, compressed, erect, two-lobed. Germen cylindrical, as long as the stamens. Style none. Stigma small, obtuse, cleft. Pod linear, one-celled, with two undulated deciduous valves. Seeds numerous, oval, dotted, arranged in two rows along a linear receptacle at each side of the pod.

C. május. Common Celandine.——Root tapering: stem about two feet high, branched, enlarged at the joints, round, smooth, leafy: leaves deeply pinnatifid, smooth: flowers in umbels, on long stalks: calyx tawny: petals yellow: seeds black and shining. The juice of every part of the plant is yellow and acrid. It removes warts, and is said to cure the itch. Perennial: flowers in May and June: grows in thickets and waste ground, generally near houses. *Engl. Bot.* vol. xxii. pl. 1561. *Engl. Fl.* vol. iii. p. 4.

3. GLAU'CIUM.

Calyx inferior, of two oblong, acute, caducous leaves. Petals four, much larger than the calyx, roundish, crumpled, spreading, deciduous, two opposite ones rather smaller. Filaments numerous, hair-like, shorter than the corolla. Anthers roundish, two-lobed. Germen superior, cylindrical, longer than the stamens. Style none. Stigma large, of two or three cleft, compressed downy lobes. Pod linear, very long, of two or three linear valves and as many cells. Seeds numerous, convex on the outer side, disposed irregular, in two rows in each cell, along linear receptacles placed between the valves.

G. lúteum. Yellow Horned Poppy. Stem smooth; stem-leaves embracing, waved; pod roughish, with minute tubercles.——Root tapering: stem from one to two feet high: the whole plant glaucous: root-leaves numerous, stalked, pinnatifid, hairy: flowers large, with bright-yellow petals: pod nearly a foot long, curved. Biennial: flowers in July and August: grows on the sea-coast. *Engl. Bot.* vol. i. pl. 8: *Chelidonium glaucium. Engl. Fl.* vol. ii. p. 6.

G. phœníceum. Scarlet Horned Poppy. Stem hairy; stem-leaves pinnatifid, cut; pod rough with erect bristles.——Root tapering: the whole plant glaucous: stem branched, erect: leaves all oblong, pinnatifid, hairy: calyx very hairy: petals scarlet, with a black spot at the base. Annual: flowers in June and July: grows on the sea-coast; very rare. *Engl. Bot.* vol. xx. pl. 1433. *Engl. Fl.* vol. iii. p. 7.

G. violáceum. Violet Horned Poppy. Stem smooth; leaves doubly pinnatifid, linear, smooth; pod three-valved and three-celled.——Root slender: stem erect, about a foot high, branched, smooth: lower leaves stalked, upper sessile: petals violet-blue, large: pod two or three inches long. Annual: flowers in May and June: grows in corn-fields; rare.

4. PAPA'VER.

Calyx of two egg-shaped, obtuse, equal, caducous leaves. Corolla of four circular, flat petals, two opposite ones of which are smaller

Filaments very numerous, hair-like, much shorter than the corolla. **Anthers** oblong, compressed, obtuse. Germen globular or oblong, large. **Style** none. Stigma shield-shaped, flat, radiated. Capsule egg-shaped or oblong, leathery, large, one-celled, partially divided by marginal partitions. Seeds kidney-shaped, very numerous, small, attached to the partitions.

* *Capsules bristly.*

P. hy'bridum. Round-rough-headed Poppy. Capsule nearly globular, furrowed, bristly; calyx hairy; stem leafy, many-flowered; leaves doubly pinnatifid.——Stem twelve or eighteen inches high, covered with minute bristles: leaves with numerous, narrow segments, each tipped with a minute bristle: flowers rather small, with scarlet petals, frequently purple at the base. Annual: flowers in July: grows in sandy fields; rare. *Engl. Bot.* vol. i. pl. 43. *Engl. Fl.* vol. iii. p. 9.

P. Argemóne. Long-rough-headed Poppy. Capsule club-shaped, ribbed, bristly; calyx slightly hairy; stem leafy, many-flowered; leaves doubly pinnatifid.——Stem from one to two feet high, hairy: leaves with narrow segments: flowers with pale scarlet petals, blackish at the base. Annual: flowers in June and July: grows in corn-fields; not uncommon. *Engl. Bot.* vol. ix. pl. 643. *Engl. Fl.* vol. iii. p. 10.

** *Capsules smooth.*

P. dúbium. Long-smooth-headed Poppy. Capsule oblong, angular, smooth; stem many-flowered, hairy; bristles of the flower-stalks close-pressed; leaves doubly pinnatifid.——Stems from one to two feet high, with spreading bristly hairs: petals light scarlet: capsule abruptly oblong. Annual: flowers in June and July: grows in corn-fields; common. *Engl. Bot.* vol. xi. pl. 644. *Engl. Fl.* vol. iii. p. 10.

P. Rhœ'as. Common Red Poppy. Capsule nearly globular, smooth; stem many-flowered, bristly; bristles of the flower-stalks spreading; leaves pinnatifid, cut.——Stems from one to two feet high, with spreading bristles: petals large, undulated, rich scarlet, sometimes purple at the base. Annual: flowers in June and July: grows in corn-fields. *Engl. Bot.* vol. ix. pl. 645. *Engl. Fl.* vol. iii. p. 11.

P. somníferum. White Poppy. Capsule nearly globular, smooth; stem many-flowered, smooth; leaves clasping the stem, notched, glaucous.——Stem three or four feet high, erect: leaves broad, waved, lobed, heart-shaped at the base: flowers large, with bluish-white petals, having a broad purple spot at the base. Opium is the inspissated milky juice of this species, obtained by making incisions in the capsule. The seeds are destitute of narcotic quality, and may be eaten. All the species of this genus yields a similar milky juice. Annual: flowers in July: has been found in a few places apparently wild. *Engl. Bot.* vol. xxx. pl. 2145. *Engl. Fl.* vol. iii. p. 11.

P. cámbricum. Yellow Poppy. Capsule oblong, smooth; stem many-flowered, nearly smooth; leaves pinnated, cut, stalked.——Stem a foot high, generally with scattered erect hairs: flowers large, with lemon-coloured petals. Perennial: flowers in June: grows in moist

rocky places, in Wales and the north of England, as well as in a few places in Scotland. *Engl. Bot.* vol. i. pl. 66. *Engl. Fl.* vol. iii. p. 14.

5. NYMPHÆA.

Calyx inferior, of four large, oblong, tough, permanent leaves, coloured on their upper surface. Petals numerous, oblong, placed in several rows upon the base of the germen. Nectary globular, in the centre of the stigma. Filaments very numerous, flat, placed on the germen, the lower gradually more dilated. Anthers linear, two-celled. Germen sessile, globular. Style none. Stigma circular, of numerous rays, which are pointed and separate at the end. Berry hard, globular, many-celled. Seeds numerous, roundish.

N. álba. White Water-lily. Leaves heart-shaped, entire; petals oblong; rays of the stigma sixteen, recurved.——Root tuberous, horizontal: leaves floating, nearly circular, heart-shaped, smooth: stalks of the leaves and flowers cylindrical: flowers about four inches in diameter, floating when expanded: calyx-leaves white above: petals white. This, in respect to beauty, is the queen of British flowers. Its large tuberous roots are collected by the Hebridians, who from a decoction of them, mixed with copperas, obtain a black colour for dying wool and yarn. Perennial: flowers in July: grows in pools, lakes, and slow rivers. The quantity of it in the Hebrides is astonishing, every lake and pool presenting it, often over an extent of several acres. *Engl. Bot.* vol. iii. pl. 160. *Engl. Fl.* vol. iii. p. 14.

6. NUPHAR.

Calyx inferior, of five or six large, oblong, tough, permanent leaves; petals numerous, oblong, much smaller than the calyx, placed upon the receptacle, furrowed and nectariferous at the back. Filaments very numerous, linear, recurved. Anthers linear, two-celled. Germen nearly sessile, egg-shaped. Style none. Stigma circular, convex, entire or notched, with many central, radiating clefts. Berry hard, egg-shaped, pointed, many-celled. Seeds numerous, egg-shaped.

N. lútea. Yellow Water-lily. Calyx five-leaved; edge of the stigma entire; leaf-stalks two-edged; lobes of the leaves meeting.——Leaves broadly heart-shaped, roundish at the end, basal lobes meeting and often overlapping each other: flower-stalks nearly cylindrical: flowers about two inches in diameter, of a golden yellow colour. This is one of the most beautiful of our native plants. Its flowers have a strong smell resembling that of brandy, or rather some kinds of wine. Perennial: flowers in July: grows in rivers and pools: rare in the north of Scotland, where the Nymphæa alba is peculiarly abundant. *Engl. Bot.* vol. ii. pl. 159. *Engl. Fl.* vol. iii. p. 15.

N. púmila. Least Yellow Water-lily. Calyx five-leaved; edge of the stigma toothed; leaf-stalks two-edged; lobes of the leaves rather distant.——Leaves heart-shaped, somewhat angular, the basal lobes not meeting: flowers hardly more than an inch in diameter, pale-yellow, tinged with green. Perennial: flowers in July: grows in lakes in the Highlands of Scotland: discovered in a pool at the foot of

Crunchan in Argyllshire, by Mr. Borrer. *Engl. Bot.* vol. xxxii. pl. 2292: *N. minima. Engl. Fl.* vol. iii. p. 16.

7. TILIA.

Calyx inferior, deeply divided into five equal, coloured, deciduous segments. Petals five, inversely egg-shaped, obtuse, somewhat notched, in some species having a small scale on the inner surface at the base. Filaments numerous, thread-like, as long as the petals. Anthers of two round lobes. Germen roundish. Style thread-shaped, erect, nearly as long as the stamens. Stigma with five obtuse corners. Capsule roundish, more or less angular, leathery, five-celled. Seeds one or two in each cell, often abortive, excepting one.

T. europæ'a. Common Lime-tree. Linden-tree. Flowers without nectaries; leaves heart-shaped at the base, serrated, pointed, smooth, except a woolly tuft at the origin of each vein beneath: cymes many-flowered; capsule leathery, hairy.——A large and handsome tree, with smooth, spreading branches: leaves unequal and entire at the base: stipules oval, smooth, in pairs at the base of each foot-stalk: flower-stalks axillar, cymose, each bearing an oblong, pale, smooth bractea, united for half its length with the stalk: flowers greenish, odorous: germen hairy. Linnæus is said to have derived his family name from a large tree of this species, the Swedish name of which is *Lin*. Not indigenous, but naturalized: flowers in July. *Engl. Bot.* vol. ix. pl. 610. *Engl. Fl.* vol. iii. p. 17.

T. pdrvifdlia. Small-leaved Lime-tree. Flowers without nectaries; leaves roundish, heart-shaped, serrate, pointed, glaucous beneath, with hairy tufts at the origin of the veins, and scattered hairy blotches; capsule roundish, nearly smooth.——A handsome tree, distinguished from the former by its much smaller leaves and flowers: germen distinctly woolly: flowers in August: grows in woods in Essex and Sussex. *Engl. Bot.* vol. xxiv. pl. 1705. *Engl. Fl.* vol. iii. p. 21.

8. CISTUS.

Calyx inferior, of five unequal, permanent leaves, the two outermost smaller. Petals five, much larger than the calyx, equal, spreading, roundish. Filaments numerous, hair-like, shorter than the corolla. Anthers small, oval. Germen superior, nearly globular. Style simple. Stigma knobbed. Capsule angular, celled, covered by the closed, permanent calyx. Seeds numerous, small, angular.

* *Stem woody; no stipules.*

C. marifdlius. Hoary Dwarf Cistus. Stems decumbent; leaves opposite, stalked, hoary beneath.——Root woody: stems branched at the base, each branch ascending and terminating in three or four corymbose flowers: leaves egg-shaped, acute, covered on both sides with close hairs: calyx hairy: petals inversely egg-shaped, bright yellow. Perennial: flowers in May and June: grows on elevated rocks and in mountainous pastures, in Wales and the north of England. *Engl. Bot.* vol. vi. pl. 396. *Engl. Fl.* vol. iii. p. 23.

** *Stem herbaceous, without stipules.*

C. guttátus. Spotted Annual Cistus. Stem erect, herbaceous; stipules and bracteas none; leaves opposite, lance-shaped, three-ribbed. ——Stem about six inches high, slightly branched: one or more simple, erect, terminal clusters: petals yellow, with a red spot at the base. Annual: flowers in June and July: grows in sandy pastures, in Jersey and Anglesea. *Engl. Bot.* vol. viii. pl. 544. *Engl. Fl.* vol. iii. p. 24.

*** *Stem herbaceous, with stipules.*

C. ledifólius. Ledum-leaved Cistus. Stem erect, herbaceous, downy; leaves lance-shaped; flower-stalks solitary, erect, opposite to the leaves, shorter than the calyx.——Stems simple, round: leaves stalked, one-ribbed, with straight veins: stipules narrow lance-shaped, acute: flowers solitary: calyx hairy: petals small, inversely egg-shaped, pale yellow. Annual: flowers in June and July: grows in sandy ground, in the south of England; very rare: Brent Downs, Somersetshire. *Engl. Bot.* vol. xxxiv. pl. 2414. *Engl. Fl.* vol. iii. p. 24.

**** *Stem woody, with stipules.*

C. surrejanus. Dotted-leaved Cistus. Stems shrubby, procumbent; leaves oblong, inclining to egg-shaped, hairy and dotted beneath; petals lance-shaped.——Stems simple, a foot long, round, covered with fine soft hairs: leaves stalked, obtuse, entire, nearly naked on the upper side: stipules lance-shaped, fringed: clusters terminal, simple, many-flowered: calyx ribbed, hairy: petals yellow. Perennial: flowers in July and August: found near Croydon, in Surrey, by Mr. Edward Du Bois. *Engl. Bot.* vol. xxxi. pl. 2207. *Engl. Fl.* vol. iii. p. 25.

C. Heliánthemum. Common Dwarf Cistus. Stems shrubby, procumbent, with fringed stipules; leaves oblong, white, and downy beneath; calyx smooth with bristly ribs, its outer leaves lance-shaped, fringed.——Stems numerous, round, downy, simple, terminating in a cluster of flowers; stipules lance-shaped, green on both sides, petals pale yellow. A shrub: flowers in July and August: grows in hilly pastures on gravelly soil. *Engl. Bot.* vol. xix. pl. 1321. *Engl. Fl.* vol. iii. p. 26.

C. tomentósus. Downy Cistus. Stems shrubby, procumbent, with hoary stipules; leaves oblong, snow-white beneath; calyx all over hoary, with hairy ribs, its outer leaves obtuse.——This species is considered by Dr. Hooker as a slight variety of the last, from which it differs chiefly in the greater hairiness of the calyx and leaves. Discovered by Mr. G. Don in Scotland. *Engl. Bot.* vol. xxxi. pl. 2208. *Engl. Fl.* vol. iii. p. 27.

C. polifólius. White Mountain Cistus. Stem shrubby, procumbent, with somewhat hairy stipules; leaves oblong, revolute, white beneath with starry hairs; calyx slightly hairy, its outer leaves fringed.——This species also resembles the *Helianthemum*; stems hoary, with close pressed hairs; leaves convex and green above with starry hairs, beneath white and densely downy with similar hairs: stipules narrow lance-shaped, acute, hairy: calyx with a few hairs on the ribs: petals white, with yellow claws. A shrub: flowers in June and July: grows on Brent Downs, Somersetshire, and near Newton Abbot in Devonshire.

PENTAGYNIA.

9. PÆO'NIA.

Calyx inferior, of five roundish, reflected, unequal, permanent leaves. Petals five, roundish, spreading, larger than the calyx. Filaments very numerous, hair-like, much shorter than the corolla. Anthers oblong, four-cornered, four-celled. Germens egg-shaped, sessile, downy. Styles none. Stigmas oblong, curved, compressed, obtuse. Follicles oblong, leathery. Seeds numerous, oval, arranged along the edges of the follicle.

P. corallina. Entire-leaved Piony. Leaves twice ternate; leaflets egg-shaped, undivided, smooth; follicles downy, recurved.——Root knobbed: stems simple, round, smooth, about two feet high: leaves smooth: flowers about four inches broad, with crimson petals. Perennial: flowers in May and June: grows on islands in the Severn. *Engl. Bot.* vol. xxii. pl. 1513. *Engl. Fl.* vol. iii. p. 29.

10. DELPHI'NIUM.

Calyx none. Petals five, inferior, unequal, spreading; the upper one extended into a long tubular spur. The rest oblong, with claws. Nectary divided, of one or two sessile leaves, placed within the petals, on the upper side, extended behind into a tube, which is contained in the spur of the uppermost petal. Filaments numerous, awl-shaped, dilated at the base, much shorter than the corolla. Anthers roundish, small, erect. Germens superior, from one to five. Styles terminal, shorter than the stamens. Stigmas simple, reflected. Follicles oblong, one-valved. Seeds numerous, angular, rough, arranged along the edges of the follicle.

D. Consólida. Field Larkspur. Capsule single; nectary of one leaf; stem subdivided.——Stem nearly two feet high, erect, leafy, branched: leaves sessile, divided to the base into three or five parts, each cut into linear segments, often forked at the end: clusters terminal, loose, few-flowered: petals deep blue in front, pale behind. The juice of the petals is said to make a good blue ink. Annual: flowers in June and July: grows in corn-fields in England; rare. *Engl. Bot.* vol. xxvi. pl. 1839. *Engl. Fl.* vol. iii. p. 30.

11. ACONITUM.

Calyx none. Petals five, inferior, unequal, four of them in pairs, opposite; the upper one hooded, or tubular, inverted, the convex part being uppermost, the deflected point recurved; two lateral ones roundish, opposite, converging; two lowermost oblong, deflected. Nectaries two, within the hollow of the upper petal, on long, awl-shaped stalks, tubular, oblique at the orifice. Filaments numerous, broad at the base, awl-shaped, short. Anthers roundish, erect. Germens superior, from

three to five, oblong. Styles terminal, awl-shaped, spreading. Stigmas simple, acute. Follicles straight, oblong, one-valved. Seeds numerous, angular, arranged at the edges of the capsule.

A. Napéllus. Common Wolf's-bane, or *Monk's-hood.* Upper petal arched at the back; lateral ones hairy at the inner side; germens three, smooth; leaves deeply five cleft, cut, with linear segments, furrowed above.——Stem erect, leafy, simple, terminating in a cluster of dark blue flowers. Perennial: flowers in June and July: found in one or two places in England. *Engl. Fl.* vol. iii. p. 31.

12. AQUILE'GIA.

Calyx none. Petals five, inferior, egg-shaped, equal, spreading. Nectaries five, equal, alternate with the petals, tubular, dilated upwards, oblique at the mouth, the outer margin ascending, the inner attached to the receptacle; their lower portion extended into a long tapering spur, obtuse at the end. Filaments from thirty to forty, awl-shaped, the outer shorter, the inner abortive, dilated, clasping the germens. Anthers heart-shaped, erect. Germens five, superior, oblong, each tapering into an awl-shaped, erect style. Stigmas simple. Follicles five, cylindrical, pointed, straight, one-valved. Seeds numerous, egg-shaped, smooth, arranged along the edges of the follicle.

A. vulgáris. Common Columbine. Nectaries about the length of the petals, their spur incurved; leaves and stem smooth; capsules hairy. ——Root tuberous: stem erect, two or three feet high, round, generally branched and bearing several flowers: root-leaves twice ternate, on long stalks; stem-leaves ternate, nearly sessile. Flowers pendulous, purple. Perennial: flowers in June: grows in meadows, pastures, and thickets. *Engl. Bot.* vol. v. pl. 297. *Engl. Fl.* vol. iii. p. 33.

13. STRATIO'TES.

Calyx superior, of one leaf, tubular, erect, with three deep marginal segments. Petals three, twice as long as the calyx, inversely egg-shaped. Filaments about twenty, thread-like, shorter than the calyx. Anthers awl-shaped, erect. Germen elliptical, obtuse, three-cornered. Styles six, deeply cleft, as long as the stamens. Stigmas simple. Berry egg-shaped, six-cornered, six-celled, tapering at both ends. Seeds numerous, inversely egg-shaped.

S. aloides. Water Soldier. Leaves sword-shaped, channelled, with a prominent rib, and sharp marginal prickles.——Leaves half a foot long or more: scape from four to six inches long, compressed, two-edged: flowers white, large. Perennial: flowers in July: grows in ditches and pools: Isle of Ely, Lincolnshire, Norfolk, Cheshire, Yorkshire; Duddingston Loch, Loch of Forfar, and Loch of Clunie, in Scotland. *Engl. Bot.* vol. vi. pl. 379. *Engl. Fl.* vol. iii. p. 34.

POLYGYNIA.

14. ANEMO'NE.

Calyx none. **Petals** from five to fifteen, oblong, inferior, regular, in one or more rows. **Filaments** numerous, hair-like, much shorter than the corolla. **Anthers** two-lobed. **Germens** superior, numerous, collected into a roundish head. **Styles** tapering, short. **Stigmas** simple, bluntish. **Seeds** numerous, pointed, tipped with the permanent styles.

A. Pulsatilla. Pasque-flower. Leaves doubly pinnate; petals six, erect; seeds with feathery tails.——Stalks four or five inches high, with an involucre of many deep, linear segments, all united at the base, and a single flower, with dull violet petals, externally silky. Perennial: flowers in April and May: grows in elevated open pastures, in England. *Engl. Bot.* vol. i. pl. 51. *Engl. Fl.* vol. iii. p. 36.

A. nemorósa. Wood Anemone. Leaves ternate or quinate; petals six, spreading; seeds pointed, without tails.——Stalk about a foot high, with an involucre of three ternate or quinate leaves, and a single flower, with white petals, externally purplish. Perennial: flowers in April and May: grows in woods and thickets, sometimes on open heaths; common. *Engl. Bot.* vol. v. pl. 355. *Engl. Fl.* vol. iii. p. 36.

15. CLE'MATIS.

Calyx none. **Petals** from four to eight, inferior, regular, oblong. **Filaments** numerous, enlarged upwards. **Anthers** oblong, two-lobed. **Germens** superior, sessile, egg-shaped, collected into a round head. **Styles** terminal, much longer than the germens. **Stigmas** simple. **Seeds** numerous, egg-shaped, compressed, tipped with the permanent styles, converted into feathery tails.

C. Vitálba. Common Traveller's Joy. Leaves pinnate, with heart-shaped leaflets: leaf-stalks twining: panicles forked, not longer than the leaves.——Stems woody, angular, climbing: panicles axillar and terminal, many-flowered: flowers white, scented: petals four, externally downy: seeds with a long, feathery, and silky tail. A shrub: flowers in July: grows in hedges. *Engl. Bot.* vol. ix. pl. 612. *Engl. Fl.* p. 39.

16. THALI'CTRUM.

Calyx none. **Petals** four or five, inferior, roundish, obtuse, deciduous. **Filaments** numerous, hair-like, somewhat enlarged at the upper part. **Anthers** terminal, oblong, drooping. **Germens** several, superior, egg-shaped, striated. **Styles** none. **Stigmas** egg-shaped, downy. **Seeds** as many as the germens, egg-shaped, furrowed or winged, without terminal appendage.

Th. alpinum. Alpine Meadow Rue. Stem unbranched, almost naked, with a simple, terminal cluster.——Stem from three to six inches

high: leaves chiefly radical, twice ternate, with wedge-shaped leaflets: flowers drooping: petals four, whitish, acute. Perennial: flowers in June: grows on high mountains in Scotland, Wales, and the north of England. *Engl. Bot.* vol. iv. pl. 262. *Engl. Fl.* vol. iii. pl. 40.

Th. minus. Less Meadow Rue. Leaves thrice pinnate, with three-cleft leaflets, glaucous on both sides; flowers panicled, pendulous.——Root creeping: stem from six to eighteen inches high, somewhat angular: leaflets generally wedge-shaped: panicles compound, spreading, with a few ternate leaves at the base: bracteas small, lance-shaped: petals four, pale-purple, with whitish edges. Perennial: flowers in June and July: grows in dry pastures, particularly abundant in all the sandy maritime pastures of the Hebrides. *Engl. Bot.* vol. i. pl. 11. *Engl. Fl.* vol. iii. p. 41.

Th. május. Greater Meadow-rue. Leaves thrice pinnate, with ternate, lobed leaflets, glaucous beneath: branches of the panicle aggregate, somewhat umbellate: flowers drooping.——Root creeping: stem three or four feet high, somewhat angular: petals four, purplish. Perennial: flowers in June and July: grows on bushy hills in the north of England; on hills at North Queensferry, found there by Mr. Maughan. *Engl. Bot.* pl. 611. *Engl. Fl.* vol. iii. p. 172. *Brit. Fl. p.* 263.

Th. flávum. Common Meadow-rue. Leaves twice pinnate, with wedge-shaped, three-cleft leaflets; panicle compound, close, corymbose; flowers erect.——Root fibrous: stem three or feet high, branched, hollow, deeply furrowed and angular: panicle dense, of very numerous erect flowers: petals four, cream-coloured. Perennial: flowers in June and July: grows in wet meadows, and near rivers and ditches, rare in Scotland. *Engl. Bot.* vol. vi. pl. 367. *Engl. Fl.* vol. iii. p. 42.

17. ADO'NIS.

Calyx inferior, of five converging, obtuse, deciduous leaves. Petals from five to fifteen, oblong, obtuse, shining, without nectaries on the claws. Filaments numerous, awl-shaped, very short. Anthers oblong, two-lobed, incurved. Germens very numerous, incurved, collected into a round head. Styles none. Stigmas acute, spreading. Seeds numerous, angular, acute, without an appendage. Receptacle cylindrical.

A. autumnális. Adonis-flower. Pheasant's-eye. Petals about eight, inversely heart-shaped; fruit egg-shaped; stem branched.——Root tapering: stem erect, branched, striated, leafy: leaves alternate, sessile, thrice pinnatifid, with linear, acute segments: petals deep shining crimson. Annual: flowers from May to October: grows in corn-fields; rare. *Eng. Bot.* vol. v. pl. 308. *Engl. Fl.* vol. iii. p. 43.

18. FICA'RIA.

Calyx inferior, of three, egg-shaped, deciduous leaves. Petals about ten, oblong, polished. Nectary a pore at the base of each petal, covered by a scale. Filaments numerous, slender, much shorter than the petals. Anthers elliptical, erect, two-celled. Germens superior,

numerous, collected into a round head. Styles none. Stigmas small. Seeds egg-shaped, tipped with a point.

F. vérna. Pilewort. Lesser Celandine.——Root of numerous oblong knobs, accompanied with fibres: stems from three to ten inches high, slightly branched, leafy: leaves alternate, stalked, heart-shaped, angular, smooth: foot-stalks longer than the leaves, two-celled, dilated, and sheathing at the base, where they generally contain one or two knobs similar to those of the root: flowers terminal, solitary: petals golden yellow, shining. Perennial: flowers in March, April, and May: grows in shady places, and in meadows; common. *Engl. Bot.* vol. ix. pl. 584. *Engl. Fl.* vol. iii. p. 47.: *Ranunculus Ficaria.*

19. RANUNCULUS.

Calyx inferior, of five egg-shaped, deciduous leaves: petals five, roundish, shining. Nectary a pore at the base of each petal, generally covered by a scale. Filaments numerous, thread-like, much shorter than the petals. Anthers linear, or heart-shaped, erect, two-celled. Germens numerous, collected into a round head. Styles none. Stigmas small. Seeds numerous, egg-shaped, tipped with a point or hook.

* *Leaves simple.*

R. Lingua. Greater Spear-wort. Leaves lance-shaped, pointed, nearly sessile, somewhat serrate; stem erect, many flowered; root fibrous; seeds smooth.——Stem about three feet high, with close-pressed hairs: calyx hairy: petals bright yellow: nectary covered by a small scale. Perennial: flowers in July and August: grows in ditches and at the edges of lakes and pools; not common. *Engl. Bot.* vol. ii. pl. 100. *Engl. Fl.* vol. iii. p. 46.

R. Flámmula. Less Spear-wort. Leaves between lance-shaped and linear, with a thickened tip, nearly entire, stalked; stem decumbent at the base; root fibrous; seeds smooth.——Stem from six to eighteen inches long, sometimes entirely decumbent, slightly branched, leafy: leaves alternate, the lower ones sometimes broad: petals gold-yellow: nectaries minute. This plant is extremely acrid, and is used in the Hebrides for raising blisters. Chopped small and infused in water, it is also employed there as a purgative for calves. Dr. Withering recommends the distilled water as an instantaneous emetic in cases of poisoning. In alpine situations it becomes creeping. Perennial: flowers from June to September: grows in watery places; common. *Engl. Bot.* vol. vi. pl. 387. *Engl. Fl.* vol. iii. p. 45.

R. graminéus. Grassy Crowfoot. Leaves between lance-shaped and linear, many-ribbed, entire; stem erect, smooth, few-flowered; root tuberous.——Stem about a foot high, round, with two or three bright yellow flowers, and a few sessile leaves: calyx smooth, spreading: nectary a tubular scale. Perennial: flowers in May and June: grows in dry elevated pastures in Wales, where it was found by Mr. Pritchard. *Engl. Bot.* vol. xxxiii. pl. 2306. *Engl. Fl.* vol. iii. p. 46.

** *Leaves divided.*

R. auricomus. Goldilocks. Wood Crowfoot. Root-leaves kidney-shaped, crenate, three-cleft; stem-leaves fingered, with linear segments; stem many-flowered; calyx coloured.——Root fibrous: stem about a

foot high, erect, branched: leaves more or less downy: flowers terminal, solitary, gold-yellow: calyx hairy, pale yellow: nectary a naked pore. Perennial: flowers in April and May: grows in woods and bushy places. *Engl. Bot.* vol. ix. pl. 624. *Engl. Fl.* vol. iii. p. 47.

R. scelerátus. Celery-leaved Crowfoot. Stem erect, hollow, much branched, leaves smooth, lower ones palmate, upper fingered; fruit oblong; seeds very numerous, minute.——Root fibrous: stem from six inches to two feet high, smooth, round, hollow, leafy: lower leaves stalked, upper sessile, uppermost undivided: flowers small pale yellow, numerous: calyx hairy, reflected: nectary somewhat tubular. This species is extremely acrid, and blisters the skin. It is said to be used by strolling beggars to produce artificial sores. Annual: flowers from June to September: grows in watery places; common. *Engl. Bot.* vol. x. pl. 681. *Engl. Fl.* vol. iii. p. 48.

R. bulbósus. Bulbous Crowfoot. Butter-cups. Calyx reflected; flower-stalks furrowed; stem erect, many-flowered; leaves compound; root bulbous; seeds smooth.——Root a solid round bulb: stem about a foot high, hairy: lower leaves compound, their leaflets cut or lobed: flowers terminal, solitary: calyx-leaves egg-shaped, hairy: petals gold-yellow: nectary covered by a scale. Perennial: flowers in May: grows in pastures and meadows; very common. *Engl. Bot.* vol. viii. pl. 515. *Engl. Fl.* vol. iii. p. 49.

R. hirsútus. Pale hairy Crowfoot. Calyx reflected, pointed; stem erect, many-flowered, hairy; leaves ternate; root fibrous; seeds tuberculated.——Stem from three inches to a foot high: flower-stalks furrowed, hairy: calyx hairy, reflected: petals gold-yellow: nectary covered by a scale. Annual: flowers from June to October: grows in moist meadows and waste ground; common. *Engl. Bot.* vol. xxi. pl. 1504. *Engl. Fl.* vol. iii. p. 50.

R. répens. Creeping Crowfoot. Calyx spreading; flower-stalks furrowed; runners creeping; leaves compound, erect, the uppermost entire.——Stem erect or ascending, about a foot high, hairy: leaves twice ternate: flowers gold-yellow: nectary covered by a notched scale. Perennial: flowers in the summer months: grows in rich soil, by walls, and in shady places; common. *Engl. Bot.* vol. viii. pl. 516. *Engl. Fl.* vol. iii. p. 51.

R. ácris. Upright Meadow Crowfoot. Calyx spreading; flower-stalks round; leaves tripartite, their segments three-cleft and cut, those of the uppermost linear and entire; stem erect, covered with close-pressed hairs.——Stem two feet high, many-flowered: calyx hairy: petals bright yellow: nectary covered by a scale. Perennial: flowers in June and July: grows in meadows and pastures; common. *Engl. Bot.* vol. x. pl. 652. *Engl. Fl.* vol. iii. p. 51.

R. arvénsis. Corn Crowfoot. Calyx spreading: stem erect, much branched, many-flowered; leaves once or twice deeply three-cleft, with narrow lance-shaped segments.——Leaves alternate: flowers small, with a hairy calyx, and pale yellow petals: seeds large and prickly. This plant is exceedingly acrid, and is said to be very dangerous to cattle. Annual: flowers in June: grows in corn-fields. *Engl. Bot.* vol. ii. p. 135. *Engl. Fl.* vol. iii. p. 52.

R. parviflórus. Small-flowered Crowfoot. Leaves simple, hairy,

sharply cut, the upper ones three-lobed; stem prostrate; seeds with hooked prickles.——Leaves roundish, acutely notched, the uppermost with three deep lance-shaped segments: flowers small, yellow. Annual: flowers in May and June: grows in fields and by hedges. *Engl. Bot.* vol. ii. pl. 120. *Engl. Fl.* vol. ii. p. 53.

R. alpéstris. Alpine White Crowfoot. Leaves simple, smooth; root-leaves somewhat heart-shaped, with three deep-lobed segments, those of the stem lance-shaped, entire: flower generally solitary; calyx smooth.——Stem three or four inches high, erect, generally simple and one-flowered: petals white: calyx reflected, pale. This species also is said to be extremely acrid. Perennial: flowers in May: grows by the sides of alpine rills, on the Clova mountains, where it was discovered by Mr. G. Don.

R. hedéraceus. Ivy-leaved Crowfoot. Stem creeping; leaves smooth, roundish or kidney-shaped, with three or five rounded entire lobes; petals small; stamens from five to ten.——Stem creeping or floating: leaves stalked, dark green. Perennial: flowers from May to August: grows in ditches and muddy places. *Engl. Bot.* vol. xxviii. pl. 2003. *Engl. Fl.* vol. iii. p. 54.

R. aquátilis. Water Crowfoot. Immersed leaves in fine hair-like segments; floating leaves three-lobed, bluntly crenate.——Stems branched, submersed: flowers on long stalks, rising a little out of the water: petals white, yellow at the base. Perennial: flowers in May and June: grows in ditches, ponds and rivers: very common. *Engl. Bot.* vol. ii. pl. 101. *Engl. Fl.* vol. iii. p. 54.

20. TRO'LLIUS.

Calyx none. Petals inferior, from five to fifteen, roundish, deciduous. Nectaries numerous, linear, flattened, incurved, with a single lip, somewhat tubular at the base. Filaments numerous, bristle-shaped, shorter than the corolla. Anthers linear, erect. Germens superior, numerous, sessile, columnar. Styles none. Stigmas pointed, spreading, shorter than the stamens. Follicles cylindrical, pointed, recurved, collected into a round head. Seeds several, egg-shaped, smooth.

T. europæ'us. Mountain Globe-Flower. Petals about fifteen, converging into a globular form; nectaries from five to ten, as long as the stamens.——Stem nearly two feet high, round, hollow, branched at the top: leaves cut into five deep segments, which are themselves divided, the root-leaves on long stalks. Flower globular, bright yellow. Perennial: flowers in May and June: grows in shady, mountainous situations: not common. *Engl. Bot.* vol. i, pl. 28. *Engl. Fl.* vol. iii. p. 56.

21. HELLE'BORUS.

Calyx none. Petals five, inferior, roundish, permanent. Nectaries numerous, very short, in a circle within the petals, consisting of one leaf, tubular, narrowest beneath, with two erect, unequal lips at the orifice. Filaments very numerous, awl-shaped. Anthers roundish,

two-celled. Germens superior, from three to ten, egg-shaped, compressed, erect. Styles awl-shaped. Stigmas roundish. Follicles egg-shaped, compressed, leathery. Seeds several, oval, in two rows at the edges of the follicle.

H. viridis. Green Hellebore. Stem many-flowered, leafy; leaves fingered; petals spreading.——Stem erect, round, a foot and a half high, forked: flowers few, terminal and axillar, green. Fetid and acrid. Perennial: flowers in April and May: grows in woods and thickets; rare. *Engl. Bot.* vol. iii. pl. 200. *Engl. Fl.* vol. iii. p. 57.

H. fœtidus. Stinking Hellebore. Stem many-flowered, leafy; leaves pedate; petals converging.——Stem two feet high, branched: flowers numerous, panicled, drooping, green, tinged with purple. Fetid, acrid, and violently purgative. Perennial: flowers in March and April: grows in thickets and waste ground; rare. *Eng. Bot.* vol. ix. pl. 615. *Engl. Fl.* vol. iii. p. 58.

22. CALTHA.

Calyx none. Petals five or more, inferior, egg-shaped, spreading. Nectaries none. Filaments numerous, thread-shaped, shorter than the petals. Anthers oblong, two-lobed, erect. Germens superior, from five to ten, oblong, compressed, erect. Styles none. Stigmas obtuse. Follicles cylindrical, pointed, two-edged. Seeds numerous, oval, arranged along the edges of the follicle.

C. palústris. Common Marsh Marigold. Stem erect; leaves heart-shaped, rounded.——Root large: stem about a foot high, hollow, round, branched: lower leaves stalked, upper sessile: petals five, roundish, bright yellow. Perennial: flowers in May and June: grows in marshy places, and about the edges of rivers and lakes. Slightly acrid, sometimes eaten by cattle. *Engl. Bot.* vol. viii. pl. 506. *Engl. Fl.* vol. iii. p. 59.

A variety with somewhat triangular leaves, and a creeping stem, is by some made a species under the name of *C. radicans*.

Class XIV. DIDYNAMIA.

Plants bearing Flowers with Four Stamens, of which the two outer are longer.

Order I. GYMNOSPERMIA. *Seeds naked, never more than four.*

* *Calyx with five segments, nearly regular.*

14. LEONU'RUS. *Anthers* sprinkled with hard dots. *Upper lip* of the corolla very hairy.
6. GLECHO'MA. *Anthers* approaching each other in pairs, and forming a cross. *Upper lip* of the *corolla* cleft.
5. ME'NTHA. *Filaments* straight, spreading widely. *Corolla* nearly regular, four-lobed.

2. TEU'CRIUM. *Upper lip* of the *Corolla* very deeply cut into two remote lobes.
1. A'JUGA. *Upper lip* of the *Corolla* minute, notched.
10. BE'TONICA. *Upper lip* of the *Corolla* nearly flat, ascending; the tube cylindrical, incurved. *Stamens* not longer than the throat.
7. LA'MIUM. *Upper lip* of the *Corolla* vaulted, entire; *lower* two-lobed, with a tooth on each side of the throat.
6. GALE'OPSIS. *Upper lip* of the *Corolla* vaulted, crenate; *lower* three-lobed, with two hollow prominences at the base in front.
9. GALEO'BDOLON. *Lower lip* of the *Corolla* in three undivided segments.
11. STACHYS. *Lower lip* of the *Corolla* with reflected lateral lobes. *Stamens* finally spreading outwards at each side.
3. NE'PETA. *Lower lip* of the *Corolla* with numerous notches: *throat* bordered and reflected at each side.
12. BALLO'TA. *Calyx* with ten furrows. *Upper lip* of the *Corolla* vaulted, hairy.
13. MARRU'BIUM. *Calyx* with ten furrows. *Upper lip* of the *Corolla* straight, linear, cleft.
4. VERBE'NA. *Calyx* with one of the five teeth abrupt. *Corolla* nearly equal, curved. *Stamens* in the tube.

** *Calyx two-lipped.*

19. SCUTELLA'RIA. *Lips* of the *Calyx* closing over the fruit; *upper lip* with a vaulted process.
17. THY'MUS. *Calyx* closed with hairs at the mouth.
18. MELI'TTES. *Calyx* open, wider than the tube of the *Corolla*. *Upper lip* of the *Corolla* nearly flat. *Anthers* approaching in pairs and forming a cross.
15. CLINOPO'DIUM. *Calyx* many-ribbed. An *involucre* of numerous taper leaves under the flowers.
16. ORIGANUM. *Calyx* ribless. *Involucres* of numerous, dilated, flat leaves, one to each flower, collected into a kind of cone.
20. PRUNE'LLA. *Filaments* forked, one of the points bearing the anther.

Order II. ANGIOSPERMIA. *Seeds in a Capsule.*

* *Calyx four-cleft.*

25. LATHRÆ'A. *Capsule* one-celled. A depressed *gland* at the base of the *germen*.
21. BA'RTSIA. *Capsule* two-celled. *Seeds* angular. *Corolla* gaping, with a contracted orifice.
22. RHINA'NTHUS. *Capsule* two-celled. *Seeds* compressed, imbricated. *Calyx* inflated, four-toothed.
24. MELAMPY'RUM. *Capsule* two-celled. *Seeds* in pairs, obtuse, smooth. *Upper lip* of the *corolla* vaulted, compressed, with a reflected border at each side.
23. EUPHRA'SIA. *Capsule* two-celled. *Seeds* striated. *Upper lip* of the *corolla* with several notches.

** *Calyx five-cleft.*

32. LIMOSE'LLA. *Capsule* imperfectly two-celled. *Corolla* bell-shaped, five-cleft, nearly equal.

28. SCROPHULA'RIA. *Capsule* two-celled. *Corolla* with an inflated nearly globular tube.
31. SIBTHO'RPIA. *Capsule* two-celled, with transverse partitions. *Corolla* nearly wheel-shaped. *Stamens* coming together laterally in pairs.
29. DIGITA'LIS. *Capsule* two-celled. *Corolla* bell-shaped, inflated beneath, the limb obliquely five-lobed, unequal.
27. ANTIRRHI'NUM. *Capsule* two-celled. *Corolla* closed with a palate, having a spur or prominence at the base behind.
26. PEDICULA'RIS. *Capsule* two-celled. *Corolla* gaping, the *upper lip* compressed.
30. LINNÆ'A. *Berry* dry, three-celled, one cell only bearing a single perfect *seed*. *Corolla* bell-shaped. *Calyx* double, the inner superior.

*** *Calyx two-leaved.*

33. OROBA'NCHE. *Calyx-leaves* lateral. A *gland* at the base of the *germen* beneath. *Capsule* one-celled, two-valved.

DIDYNAMIA.—GYMNOSPERMIA.

1. A'JUGA.

Calyx deeply divided into five nearly equal segments, permanent. Corolla gaping; tube sometimes inflated at the base; upper lip very short, erect, abrupt, notched; lower lip large, three-lobed; the middle lobe undivided or notched; the lateral lobes small. Filaments longer than the upper lip, incurved. Germens superior, of four rounded lobes. Style incurved. Stigma divided into two acute spreading segments. Seeds four, oblong, rugged, in the bottom of the unaltered calyx.

A. pyramidâlis. Pyramidal Bugle. Plant hairy; whorls of flowers crowded into a pyramidal form; root-leaves very large, inversely egg-shaped, obtuse, crenate; upper lip of the corolla deeply cleft.—Stem four or five inches high: corolla bluish-purple, with dark streaks: upper lip in two deep acute lobes. Perennial: flowers in June: grows in dry heathy pastures in the Highlands of Scotland: found on Ben Nevis by Dr. Hope, Tor Aichaltie by Mr. W. Gibb, and on Ronaval in Harris. *Engl. Bot.* vol. xviii. pl. 1270. *Engl. Fl.* vol. iii. p. 66.

A. alpina. Alpine Bugle. Leaves nearly smooth, irregularly toothed, the uppermost white; whorls of flowers rather distant.—Stem four or five inches high: corolla pale blue, with darker streaks. Perennial: flowers in July: grows on mountains; rare: Carnarvonshire, Derbyshire, Durham, and Aberdeenshire. *Engl. Bot.* vol. vii. pl. 477. *Engl. Fl.* vol. iii. p. 65.

A. réptans. Common Bugle. Plant almost smooth, with a solitary stem and creeping scyons; lower lip of the corolla four-cleft.—Stem erect, simple, about six or eight inches high: flowers pale blue. Perennial: flowers in May: grows in woods and moist pastures; common. *Engl. Bot.* vol. vii. pl. 489. *Engl. Fl.* vol. iii. p. 65.

A. Chamæpitys. Yellow Bugle. Ground Pine. Stem spreading, *branched;* leaves divided into three linear entire segments: flowers

axillar, solitary, shorter than the leaves.——Stems several, hairy: leaves crowded: corolla yellow. Annual: flowers in April and May: grows in sandy fields in England. *Engl. Bot.* vol. ii. p. 77. *Engl. Fl.* vol. iii. p. 67.

2. TEU'CRIUM.

Calyx somewhat bell-shaped, a little unequal, tumid at the base, the limb deeply divided into five acute segments. Corolla gaping; tube cylindrical, short, curved upwards; upper lip as if wanting, being divided to the base into two distant, lateral lobes; lower lip spreading, three-lobed, the central lobe largest. Filaments much longer than the upper lip, ascending, curved. Germen superior, four-cleft. Style incurved. Stigma divided into two acute, spreading segments. Seeds four, oblong, wrinkled, in the bottom of the permanent calyx.

T. Scorodónia. Wood Sage. Wood Germander. Leaves heart-shaped, serrate, stalked: flowers in lateral clusters; stems erect. ——Root creeping. Stem about a foot and a half high, acutely four-cornered, hairy; leaves wrinkled: corolla pale yellow. The whole plant is bitter, and is said to answer instead of hops in making beer. Perennial: flowers in July: grows in woods, the clefts of rocks, and among rubbish; common. *Engl. Bot.* vol. xxii. pl. 1543. *Brit. Fl.* vol. iii. p. 68.

T. Scordium. Water Germander. Leaves oblong, sessile, downy, with tooth-like serratures; flowers axillar, stalked, in pairs; stem procumbent.——Root creeping: stems branched: leaves hoary: corolla pale purple. Very bitter. The leaves powdered are used as a vermifuge. Perennial: flowers in July and August: grows in wet meadows; rare. Isle of Ely, about Cambridge, and on the banks of the Isis. *Eng. Bot.* vol. xii. pl. 828. *Engl. Fl.* vol. iii. p. 68.

T. Chamæ'drys. Wall Germander. Leaves somewhat egg-shaped, stalked, deeply crenate; flowers axillar, three together, stalked; stem rounded, hairy.——Root creeping: stems nearly erect, about a foot high, with rounded corners: leaves fringed, even: flowers crimson. The whole plant is very bitter, and was formerly used medicinally. Perennial: flowers in July: grows on old buildings: Winchelsea Castle; city wall of Norwich; an old wall at Rubislaw, near Aberdeen, &c. *Engl. Bot.* vol. x. pl. 680. *Engl. Fl.* vol. iii. p. 69.

3. NE'PETA.

Calyx of one leaf, tubular, cylindrical, with five acute, erect teeth. Corolla gaping: tube cylindrical, slender, incurved, dilated at the throat, which has on each side a narrow, reflected lobe; upper lip erect, roundish, slightly cleft; lower rounded, concave, large, undivided, with numerous notches. Filaments awl-shaped, close to each other, covered by the upper lip. Anthers incumbent. Germen small, four-cleft. Style thread-shaped, of the length of the stamens. Stig-

ma cleft, acute. Seeds four, nearly egg-shaped, even, in the bottom of the dry permanent calyx.

N. catária. Common Cat Mint. Flowers in spikes; whorls on short stalks; leaves stalked, heart-shaped, with tooth-like serratures.——The whole plant soft and downy: stems two or three feet high, erect, branched; leaves paler beneath: flowers numerous, white, lower lip dotted with crimson. Cats are extravagantly fond of the smell of this plant. *Engl. Bot.* vol. ii. pl. 137. *Engl. Fl.* vol. iii. p. 70.

4. VERBE'NA.

Calyx tubular, angular, with five marginal teeth, one rather shorter than the rest. Corolla unequal; tube cylindrical, straight, twice as long as the calyx; limb spreading, divided into five deep, rounded, somewhat unequal segments. Filaments two or four, bristle-shaped, very short, incurved, within the tube of the corolla. Anthers of two rounded lobes. Germen four-cornered. Styles slender, as long as the tube. Stigmas obtuse. Seeds two or four, oblong.

V. officinális. Common Vervain. Stamens four; spikes slender, panicled; leaves deeply cut; stem generally solitary.——Root woody: stem ascending a foot and a half high, leafy, covered with minute bristles: leaves roughish, pinnatifid: flowers small, bluish. Perennial: flowers in July: grows by road-sides, and in waste ground, about villages. *Engl. Bot.* vol. xi. pl. 767. *Engl. Fl.* vol. iii. p. 71.

5. MEN'THA.

Calyx of one leaf, tubular, erect, with five nearly equal, marginal teeth. Corolla straight, funnel-shaped, a little longer than the calyx: limb deeply divided into four nearly equal segments, the upper slightly notched. Filaments awl-shaped, straight, distant, arising from the throat of the corolla. Anthers two-lobed. Germen superior, four-lobed. Style thread-shaped, erect. Stigma protruded, divided into two sharp, equal, spreading segments. Seeds four, small, in the bottom of the calyx.

M. sylvéstris. Horse Mint. Spikes oblong, scarcely interrupted; leaves deeply serrate, acute, downy; bracteas narrow lance-shaped; calyx hairy.——The whole plant covered with fine downy hairs: stems erect, two or three feet high, branched, leafy, with deflected hairs: leaves sessile, egg-shaped, hoary: spikes terminal, with linear bracteas, and pale purple flowers. Perennial: flowers in August and September: grows in watery places. *Engl. Bot.* vol. x. pl. 686. *Engl. Fl.* vol. iii. p. 73.

M. víridis. Spear Mint. Spikes elongated, interrupted; leaves lance-shaped, acute, naked, sessile; bracteas linear; flower-stalks smooth.——Stems two or three feet high, erect, branched, acutely four-cornered, smooth: spikes panicled, elongated, acute, the whorls of pale purple flowers a little distant. All the species of mint have a strong aromatic smell, but the properties of this being more agreeable

than those of the others, it has been preferred, and is employed for culinary and medicinal purposes. Perennial: flowers in August: grows in watery places. *Engl. Bot.* vol. xxxiv. pl. 2424. *Engl. Fl.* vol. iii. p. 75.

M. rotundifólia. Round-leaved Mint. Spikes oblong, interrupted, somewhat hairy; leaves elliptical, obtuse, wrinkled, acutely crenate, shaggy beneath; bracteas lance-shaped.——The whole plant covered with long soft hairs: stems about two feet high: under surface of the leaves white and woolly. Perennial: flowers in August and September: grows in wet places. *Engl. Bot.* vol. vii. pl. 446. *Engl. Fl.* vol. iii. p. 74.

M. piperíta. Pepper Mint. Spikes obtuse, interrupted below, leaves stalked, somewhat egg-shaped, smoothish; calyx very smooth at the base.——Stems nearly erect, roughish with recurved hairs, from two to four feet high: leaves dark green, acute, serrate, more hairy beneath: spikes interrupted and leafy below: corollas purple: bracteas lance-shaped, fringed. Perennial: flowers in August and September: grows in watery places. The essential oil and distilled water of this plant are used in a variety of cordial or medicinal preparations. *Engl. Bot.* vol. x. pl. 687. *Engl. Fl.* vol. iii. p. 76.

M. citráta. Bergamot Mint. Spikes in heads, very obtuse; leaves stalked, heart-shaped, naked on both sides; calyx and flower-stalks smooth.——Stems about two feet high, branched: leaves serrate: flowers in round, terminal heads: corolla reddish-purple. Perennial: flowers in August and September: grows in watery places; rare. *Engl. Bot.* vol. xv. pl. 1025: *M. odorata. Engl. Fl.* vol. iii. p. 78.

M. hirsúta. Hairy Mint. Flowers in heads or whorls; leaves stalked, egg-shaped, serrate, hairy; calyx hairy; flower-stalks with recurved hairs.——This species varies exceedingly in its appearance; flowers pale purple. Perennial: flowers in August and September: grows in ditches, and by the sides of pools, lakes, and streams; common. *Engl. Bot.* vol. vii. pl. 447. and vol. vii. pl. 448. *Engl. Fl.* vol. iii. p. 79.

M. rúbra. Tall Red Mint. Flowers in whorls, stem erect, zig-zag; leaves stalked, broadly egg-shaped, serrate, smooth; flower-stalks and lower part of the calyx smooth.——Stems from four to five feet high: leaves of a deep shining green, bracteas linear, fringed: corolla large, purplish-red. Perennial: flowers in September; grows in watery places. *Engl. Bot.* vol. xx. pl. 1413. *Engl. Fl.* vol. iii. p. 82.

M. gentílis. Bushy Red Mint. Flowers in whorls; stem much branched, spreading; leaves stalked, egg-shaped, serrate, slightly hairy; flower-stalks and lower part of the calyx nearly smooth.——Stem erect, bushy, with numerous, spreading branches, about a foot and a half high: bracteas lance-shaped, hairy: corolla pale purple. Perennial: flowers in August: grows in watery places; rare. *Engl. Bot.* vol. xxx. pl. 2118. *Engl. Fl.* vol. iii. p. 83.

M. arvénsis. Corn Mint. Flowers in whorls; leaves stalked, egg-shaped; stem branched, spreading; calyx bell-shaped, covered with spreading hairs.——Pale green, hairy: stems from six inches to a foot

long, generally decumbent: leaves serrate: flowers pale purple. The smell of this species has been compared to that of green cheese. Perennial: flowers from June to September: grows in corn-fields, in dry ditches, and in pastures. *Engl. Bot.* vol. xxx. pl. 2119. *Engl. Fl.* vol. iii. p. 85.

M. Pulégium. Penny Royal. Flowers in whorls; leaves egg-shaped, blunt, obtusely crenate, downy; stems prostrate; flower-stalks and calyx downy.——Stems hairy, branched, creeping: leaves stalked, full of pellucid dots: corolla light purple, externally hairy. Perennial: flowers in September: grows in moist heaths and pastures; rare. *Engl. Bot.* vol. xv. pl. 1026. *Engl. Fl.* vol. iii. p. 87.

6. GLECHO'MA.

Calyx of one leaf, tubular, cylindrical, striated, with five pointed, unequal, marginal teeth. Corolla gaping: tube slender, compressed; upper lip erect, obtuse, cleft half-way down; lower lip three-lobed, the middle lobe larger and cleft. Filaments covered by the upper lip. Anthers of each pair coming together, and forming a cross. Germen egg-shaped, four-cleft. Style thread-shaped, curved under the upper lip. Stigma cleft, acute. Seeds four, egg-shaped, in the bottom of the permanent calyx.

G. hederácea. Ground Ivy. Gill. Alehoof. Leaves kidney-shaped, crenate.——Roots creeping, sending out long runners: stems frequently several feet long, creeping: leaves stalked: flowers bluish-purple, with a variegated palate. This plant is aromatic, and has been variously used as a medicine. Perennial: flowers in April and May: grows by old walls, hedges, and road-sides. *Engl. Bot.* vol. xii. pl. 853. *Engl. Fl.* vol. iii. p. 88.

7. LA'MIUM.

Calyx of one leaf, tubular, becoming wider towards the mouth, with five nearly equal, awn-tipped teeth. Corolla gaping; tube cylindrical, very short; limb open; throat inflated, compressed, bulging, bordered at each side with one or more little reflected teeth; upper lip vaulted, roundish, obtuse; lower lip shorter, inversely heart-shaped, notched. Filaments awl-shaped, covered by the upper lip. Anthers oblong, hairy. Germen four-cleft. Style thread-shaped, of the length of the stamens. Stigma divided into two acute, spreading segments. Seeds four, short, three-cornered, convex on one side, at the bottom of the calyx.

L. álbum. White Dead-nettle. White Archangel. Leaves heart-shaped, pointed, deeply serrate, hairy: flowers about twenty in a whorl.——Root creeping: stems decumbent at the base, erect, about a foot high, covered with short deflected hairs: leaves veiny, hairy: flowers large, white, hairy. Perennial: flowers in May and June, but individuals may be got in flower at all seasons: grows among rubbish, and by hedges, walls, and road-sides; common. *Engl. Bot.* vol. xi. pl. 768 *Engl. Fl.* vol. iii. p. 89.

L. maculátum. *Spotted Dead-nettle.* Leaves heart-shaped, pointed, deeply serrate, hairy; flowers about ten in a whorl.——Root creeping: flowers large, crimson, the lower lips speckled: in other respects, this greatly resembles the preceding species. Perennial: flowers in April: grows in woods and on banks; rare. *Engl. Bot.* vol. xxxvi. pl. 2550. *Engl. Fl.* vol. iii. p. 90.

L. purpúreum. *Red Dead-nettle,* or *Archangel.* Leaves heart-shaped, bluntish, unequally crenate, stalked, the upper ones crowded; tube of the corolla closed near the bottom with hairs.——Root fibrous: stem curved at the base and branched, then erect, densely leafy at the top: flowers purplish-red. Annual: flowers all the year round: grows in loose soil every where. *Engl. Bot.* vol. xi. pl. 769. *Engl. Fl.* vol. iii. p. 91.

L. incísum. *Cut-leaved Dead-nettle.* Leaves broadly heart-shaped, obtuse, stalked, irregularly cut, the upper ones crowded; tube of the corolla internally naked.—— Resembling the last, but differing essentially in the characters given. The leaves are less rugged and thinner. Annual: flowers all the year round: grows in loose soil. *Engl. Bot.* vol. xxvii. pl. 1933. *Engl. Bot.* vol. iii. p. 91.

L. amplexicaúle. *Hen-bit Dead-nettle.* Leaves broadly heart-shaped, obtuse, deeply crenate, the upper ones embracing the stem.——Lower leaves stalked, upper sessile, all hairy: corolla with the upper lip crimson and downy, the lower pale and spotted. It frequently occurs with a small externally hairy corolla, which never expands. Annual: flowers in the summer months: grows in loose soil. *Engl. Bot.* vol. xi. pl. 770. *Engl. Fl.* vol. iii. p. 92.

8. GALEO'PSIS.

Calyx of one leaf, tubular, with five spreading, thorn-tipped teeth, as long as the tube. Corolla gaping; tube slender at the base, dilated at the throat, which has two prominences, hollow beneath, in front; upper lips vaulted, roundish, serrate at the end; lower lip deeply three-lobed, the lateral lobes roundish, the middle one larger, cleft and crenate. Filaments awl-shaped, covered by the upper lip. Anthers roundish, cleft. Germen superior, four-lobed. Style thread-shaped, as long as the stamens. Stigma divided into two acute, spreading segments. Seeds four, triangular, convex at the top, in the bottom of the stiff, thorny, open calyx.

G. Ladánum. *Red Hemp-nettle.* Stem not swelled below the joints; leaves lance-shaped, somewhat serrate, hairy; upper lip of the corolla slightly crenate.——Stem about a foot high, erect, with opposite branches: flowers in dense whorls: corolla rose-coloured, spotted with crimson and white. Annual: flowers in August and September: grows among rubbish and in gravelly fields. *Engl. Bot.* vol. xiii. pl. 884. *Engl. Fl.* vol. iii. p. 93.

G. villósa. *Downy Hemp-nettle.* Stem not swelled below the joints; leaves narrowly egg-shaped, serrate, very soft and downy; upper lip of the corolla deeply crenate.——Stem erect, branched, woolly: leaves stalked, the lower egg-shaped, the upper lance-shaped, taper-

pointed: calyx deeply shaggy: corolla large, pale yellow, with a large cleft upper lip. Annual: flowers in July and August: grows in sandy corn-fields; not common. *Engl. Bot.* vol. xxxiii. pl. 2353. *Engl. Fl.* vol. iii. p. 94.

G. Tétrahit. Common Hemp-nettle. Stem bristly, swelled below the joints; corolla twice as long as the calyx, its upper lip nearly straight. ——Stem from one to two feet high, rough with deflected, very sharp, prickly bristles: leaves egg-shaped, acute, serrate, hairy on both sides: flowers in numerous dense whorls: corolla with a purple upper lip, and a nearly equally three-lobed lower one, variegated with white and purple. Annual: flowers in June and July: grows in cultivated grounds, hedges, and waste places; common. *Engl. Bot.* vol. iii. pl. 207. *Engl. Fl.* vol. iii. p. 94.

G. versicolor. Large-flowered Hemp-nettle. Stem bristly, swelled below the joints; corolla thrice as long as the calyx, its upper lip vaulted.——Stem from one to two feet high, with deflected bristles: corolla large, yellow, the middle segments of the lower lip inversely heart-shaped, purple. Annual: flowers in July: grows among corn. *Engl. Bot.* vol. x. pl. 667. *Engl. Fl.* vol. iii. p. 95.

9. GALEO'BDOLON.

Calyx of one leaf, tubular, bell-shaped, with five unequal, spreading, thorn-tipped teeth, shorter than the tube, the upper tooth erect, at some distance from the other. Corolla gaping: tube cylindrical, as long as the calyx; upper lip oval, vaulted, hairy, entire, fringed; lower lip shorter, divided into three oblong, acute, undivided segments, the middle one longest. Filaments awl-shaped, covered by the upper lip. Anthers roundish, two-lobed. Germen four-lobed. Style thread-shaped, as long as the stamens. Stigma divided into two acute spreading segments. Seeds four, short, three-cornered, abrupt, in the bottom of the open calyx.

G. lúteum. Yellow Weasel-snout. Root creeping; stems eighteen inches high, simple, leafy, covered with deflected hairs: leaves stalked, egg-shaped, serrate, hairy: whorls numerous, hairy-flowers: corolla large, yellow, the lower lip spotted with red. Perennial: flowers in May: grows in woods and hedges. *Engl. Bot.* vol. xi. pl. 287. *Engl. Fl.* vol. iii. p. 96.

10. BETO'NICA.

Calyx of one leaf, tubular, cylindrical, with five nearly equal, thorn-tipped teeth, shorter than the tube. Corolla gaping: tube cylindrical, curved; upper lips roundish, undivided, nearly flat, erect; lower lip longer, divided into three deep segments, the middle one broader, roundish, notched. Filaments awl-shaped, inclined towards the upper lip. Anthers round, two-lobed. Germen rounded, four-lobed. Style thread-shaped, as long as the stamens. Stigma cleft, acute. Seeds four, egg-shaped, in the bottom of the calyx.

B. officinalis. Wood Betony. Spike interrupted; middle segment of the lower lip notched.——Stem rough, with deflected bristles: leaves oblong, deeply serrate, the lower ones stalked: corolla purple. Perennial: flowers in July and August: grows in woods and thickets. It was formerly much used in medicine. The powdered leaves excite sneezing, and the root is said to be emetic. *Engl. Bot.* vol. xvi. pl. 1142. *Engl. Fl.* vol. iii. p. 97.

11. STA'CHYS.

Calyx of one leaf, tubular, angular, with five spreading, unequal, thorn-pointed teeth, scarcely so long as the tube. Corolla gaping; tube very short; throat oblong, swelling beneath at the base; the upper lip erect, egg-shaped, vaulted; lower lip larger, with three lobes; the lateral ones reflected, the middle lobe largest and notched. Filaments awl-shaped, ultimately bent towards the sides of the mouth. Anthers roundish, two-valved. Germen with four divisions. Styles thread-shaped, as long as the stamens. Stigma cleft, acute. Seeds four, angular, abrupt, in the bottom of the calyx.

S. Sylvatica. Hedge Woundwort. Whorls of six flowers; leaves heart-shaped, acute, stalked.——Stem two or three feet high, erect, leafy, hairy: leaves serrate, veined, hairy: flowers dull red, the palate variegated with white and dark purple. It has a strong fetid smell, which is imagined to attract toads. Perennial: flowers in July and August: grows among rubbish, and by hedges and walls. *Engl. Bot.* vol. vi. pl. 416. *Engl. Fl.* vol. iii. p. 98.

S. ambigua. Ambiguous Woundwort. Whorls of six flowers; leaves oblong, stalked, heart-shaped at the base.——Stem and leaves hairy: flowers red, the palate variegated. Perennial: flowers in August and September: grows in waste places and cultivated ground. *Engl. Bot.* vol. xxiv. pl. 1675. *Engl. Fl.* vol. iii. p. 99.

S. palustris. Marsh Woundwort. Whorls of from six to ten flowers; leaves lance-shaped, embracing the stem; root tuberous.——Stem erect, from two to three feet high, rough with deflected bristles: leaves serrate, somewhat woolly beneath: flowers purplish red, variegated with white and dark purple. Perennial: flowers in August: grows about edges of rivers, ponds, and ditches, and in wet fields. *Engl. Bot.* vol. xxiv. pl. 1675. *Engl. Fl.* vol. iii. p. 99.

S. germanica. Downy Woundwort. Whorls many-flowered, leaves egg-shaped, crenate, densely covered with white woolly hairs; stem woolly, erect.——Stems two feet high: corolla light purple, palate striped with white. Perennial: flowers in September: grows in hedges and by road-sides; rare. *Engl. Bot.* vol. xii. pl. 829. *Eng. Fl.* vol. iii. p. 100.

S. arvensis. Corn Woundwort. Whorls six-flowered; stem weak; leaves heart-shaped, obtuse, crenate, slightly hairy.——Stem branched, ascending: corolla small, light purple, palate white and spotted with purple. Annual: flowers in July and August: grows in gravelly or sandy fields. *Engl. Bot.* vol. xvii. pl. 1154. *Engl. Fl.* vol. iii. p. 100.

12. BALLO'TA.

Calyx of one leaf, tubular, oblong, with five corners, ten ribs, and ten furrows, the limb dilated, spreading, plaited, regular, with five pointed teeth. Corolla gaping; tube cylindrical, as long as the calyx; upper lip erect, egg-shaped, notched: lower lip three-lobed, the middle lobe larger and cleft. Filaments awl-shaped, directed towards the upper lip. Anthers oblong, two-valved. Germen small, four-lobed. Style thread-shaped, as long as the stamens. Stigma slender, cleft. Seeds four, egg-shaped, in the bottom of the somewhat hardened calyx.

B. nigra. Black Horehound. Leaves egg-shaped, undivided, serrate; calyx funnel-shaped, abrupt, with short spreading teeth.——Stem two or three feet high, erect, branched, downy: calyx dilated at the mouth: corolla dull purple: upper lip cleft, covered externally with white hairs, lower marked with white veins. Perennial: flowers in July and August: grows among rubbish, and in hedges. *Engl. Bot.* vol. i. pl. 46. *Engl. Fl.* vol. iii. p. 101.

13. MARRU'BIUM.

Calyx of one leaf, tubular, funnel-shaped, with ten furrows, the limb spreading, regular, generally with ten narrow teeth. Corolla gaping; tube cylindrical; throat elongated, tubular; upper lip erect, linear, divided into two acute lobes; lower lip broader, reflected, divided into three deep lobes, the lateral ones acute, the middle lobe larger and cleft. Filaments much shorter than the corolla, covered by the upper lip. Anthers small, oblong. Germen rounded, four-lobed. Style thread-shaped, as long as the stamens. Stigma cleft, acute. Seeds four, oblong, in the bottom of the hardened calyx, which is contracted at the neck.

M. vulgâre. Common White Horehound. Calyx teeth ten, bristle-shaped, hooked backwards; leaves broadly egg-shaped, unequally serrate.——Stem bluntly four-cornered, branched, woolly: lower leaves stalked, upper sessile, woolly: flowers white. Perennial: flowers in July: grows in dry waste ground, and by road-sides. *Engl. Bot.* vol. vi. pl. 410. *Engl. Fl.* vol. iii. p. 103.

14. LEONU'RUS.

Calyx of one leaf, funnel-shaped, with five prominent angles, and five acute spreading teeth. Corolla gaping: tube narrow, short: upper lip longest, concave, protuberant, rounded and undivided at the end, shaggy; lower lip reflected, deeply divided into three lance-shaped, nearly equal lobes. Filaments much shorter than the corolla, covered by the upper lip. Anthers oblong, compressed, cleft, covered with minute, globular, shining, hard dots. Germen four-lobed, abrupt. Style thread-shaped, incurved. Stigma cleft, acute. Seeds four, oblong, abrupt, hairy, in the tube of the hardened calyx.

L. Cardiaca. Common Motherwort. Stem leaves lance-shaped, *three-lobed.*——Stem two or three feet high, minutely downy, acutely

four-cornered: calyx stiff and sharp-bristled: corolla purplish, the upper lip white with erect hairs, the lower variegated.

15. CLINOPO'DIUM.

Involucre of numerous bristle-shaped leaves, under the flowers, nearly as long as the calyx. Calyx of one leaf, tubular, many-ribbed, slightly curved, two-lipped: upper lip broader, ascending, divided into three acute segments; lower lip longer, incurved, divided into two deep slender segments; throat closed with hairs. Corolla gaping: tube cylindrical, rather short; throat longer and wider; upper lip erect, concave, obtuse, slightly cleft; lower lip divided into three segments, the middle one very broad and notched. Filaments cylindrical, directed toward the upper lip, shorter than the corolla. Anthers two-lobed, meeting in pairs so as to form a cross. Germen four-lobed. Style thread-shaped, as long as the stamens. Stigma two-cleft, pointed. Seeds four, egg-shaped, in the bottom of the closed, tumid calyx.

C. vulgáre. Common Wild Basil. Leaves egg-shaped, obscurely serrate; whorls bristly; involucral leaves awl-shaped; flower-stalks branched.——Stems ascending, about a foot high, hairy: whorls few, axillar and terminal: flowers light-purple. Perennial: flowers in August: grows in bushy places, about hedges, and by roads. *Engl. Bot.* vol. xx. pl. 1401. *Engl. Fl.* vol. iii. p. 105.

16. ORI'GANUM.

Involucre of numerous imbricated, egg-shaped, flat, coloured leaves, one under each flower, longer than the calyx. Calyx of one leaf, with an obtusely angular tube. Corolla gaping; tube cylindrical, compressed; upper lip, erect, flat, obtuse, notched; lower lip deeply divided into three nearly equal, undivided lobes. Filaments thread-shaped, as long as the corolla. Anthers distant, egg-shaped, two-lobed. Germen four-lobed. Style thread-shaped, ascending. Stigma slightly notched. Seeds four, egg-shaped, in the bottom of the closed calyx.

O. vulgáre. Common Marjoram. Spikes roundish, panicled, crowded, erect; involucral leaves egg-shaped, longer than the calyx.——Stem a foot high, purplish, leafy, with short recurved hairs: leaves egg-shaped, very slightly serrate, opposite, dotted, hairy, sprinkled with resinous dots: flowers light purple. It has a warm aromatic flavour. Perennial: flowers in July and August: grows in bushy places and dry banks. *Engl. Bot.* vol. xvi. pl. 1143. *Engl. Fl.* vol. iii. p. 106.

17. THY'MUS.

Calyx of one leaf, tubular, many-ribbed, two-lipped, closed at the mouth with hairs; upper lip broader, flat, erect, with three acute teeth; lower lip of two longer awl-shaped teeth. Corolla gaping; tube as long as the calyx; upper lip shorter, flat, erect, obtuse, with a small notch; lower lip longer and broader, three-lobed, the middle lobe

broader. Filaments thread-shaped, incurved, shorter than the corolla. Anthers two-lobed. Germen four-cleft. Style thread-shaped. Stigma divided into two acute segments. Seeds four, small, roundish, in the bottom of the closed calyx.

T. Serpyllum. Wild Thyme. Flowers in small heads; stems branched, decumbent; leaves flat, egg-shaped, obtuse, entire, fringed at the base.——Stems lying along the ground, somewhat woody, with numerous branches, each terminating in a dense head of pale purple flowers. The smell of the whole plant is aromatic and pleasant. Bees are said to be greatly attached to this plant, and it has been alleged to give a fine flavour to mutton. It varies greatly as to size and hairiness, as well as to smell, certain varieties being entirely scentless. Perennial: flowers in July and August: grows in dry pastures; common. *Engl. Bot.* vol. xxii. pl. 1514. *Engl. Fl.* vol. iii. p. 108.

T. Acínos. Basil Thyme. Flowers in whorls, one on each flower-stalk, stems branched, ascending; leaves acute, serrate.——Stems about six inches high, leafy: flowers bluish-purple, variegated with white and dark purple. Annual: flowers in July and August: grows in cultivated fields and dry pastures; not common. *Engl. Bot.* vol. vi. pl. 411. *Engl. Fl.* vol. iii. p. 109.

T. Calamintha. Common Calamint. Flowers in whorls, on branched stalks; leaves egg-shaped, serrate: stem erect, downy.——Flower-stalks three-forked, the lateral divisions again forked: corolla twice as long as the calyx, light purple dotted with blue. The whole plant has a pleasant aromatic smell. Perennial: flowers in July and August: grows by waysides and the borders of fields; not common. *Engl. Bot.* vol. xxvi. pl. 1676. *Engl. Fl.* vol. iii. p. 109.

T. Népeta. Lesser Calamint. Flowers in whorls, on branched stalks, longer than the leaves; leaves serrate; stem ascending, hairy.——Flower-stalks subdivided: flowers pale purple: mouth of the calyx with conspicuous white hairs. Perennial: flowers in August: grows by waysides, and on dry banks. *Engl. Bot.* vol. xx. pl. 1414. *Engl. Fl.* vol. iii. pl. 110.

18. MELITTIS.

Calyx bell-shaped, slightly angular, straight, two-lipped; upper lip, rather longer, acute; lower acute, deeply cleft. Corolla gaping; tube much narrower than the calyx; throat slightly dilated; upper lip erect, rounded, entire; lower lip three-lobed, the middle lobe larger, and inversely heart-shaped. Filaments awl-shaped, straight, shorter than the upper-lip. Anthers two-lobed, coming together so as to form a double cross. Germen four-lobed, downy. Style thread-shaped, as long as the stamens. Stigma cleft, acute. Seeds four, oval, small, in the bottom of the open calyx.

M. Melissophyllum. Reddish Bastard-balm. Calyx with three unequal lobes.——Stem nearly simple, covered with fine hairs: broadly lance-shaped, serrate, hairy: corolla twice as long as the calyx, downy, externally pale red, internally whitish, with a crimson spot on

each of the lobes. Perennial: flowers in May and June: grows in woods and hedges in the south and west of England. *Engl. Bot.* vol. ix. pl. 577. *Engl. Fl.* vol. iii. p. 111.

M. grandiflóra. Purple-and-White Bastard-balm. Calyx with four nearly equal lobes.——Leaves broadly lance-shaped, acutely serrate; corolla large, cream-coloured, the middle lobe of the lower lip almost entirely covered by a violet spot. Perennial: flowers in May: grows in woods and hedges in Devonshire and Cornwall; very rare. *Engl. Bot.* vol. ix. pl. 636. *Engl. Fl.* vol. iii. p. 112.

19. SCUTELLA'RIA.

Calyx of one leaf, tubular, very short, slightly two-lipped, with four shallow, obtuse lobes, closed after flowering by a dorsal scale. Corolla gaping, with a very short tube; upper lip concave, divided into three segments, the middle one cleft and concave, the other flat, acute, lower lip broader, divided into three shallow lobes. Filaments concealed under the upper lip. Anthers small, roundish, two-lobed. Germen four-lobed. Style thread-shaped, as long as the stamens. Stigma undivided, acute, incurved. Seeds four, roundish, in the bottom of the calyx, and covered by the enlarged dorsal scale.

S. galericulàta. Common Skull-cap. Leaves lance-shaped, crenate, wrinkled, heart-shaped at the base; flowers axillar.——Stem about a foot high, erect, leafy: flowers purplish-blue. Perennial: flowers in July and August: grows on the banks of rivers and lakes. *Engl. Bot.* vol. viii. pl. 523. *Engl. Fl.* vol. iii. p. 113.

S. minor. Less Skull-cap. Leaves egg-shaped, entire, heart-shaped at the base; flowers axillar.——From four to six inches high: flowers pale reddish-purple, the lower lip white, dotted with red. Perennial: flowers in July and August: grows in watery places; not common. *Engl. Bot.* vol. viii. pl. 524. *Engl. Fl.* vol. iii. p. 113.

20. PRUNE'LLA.

Calyx bell-shaped, two-lipped; upper lip flat, dilated, abrupt, with three very short, acute teeth; lower lip much narrower, straight, divided into two acute segments. Corolla gaping; tube short, cylindrical; throat longer and wider; upper lip concave, entire, inflected; lower lip reflected, divided into three obtuse crenate lobes, the middle one broader. Filaments directed toward the upper lip, awl-shaped, forked at the top. Anthers on the lower branch of the filaments. Germen four-lobed. Style thread-shaped, as long as the stamens. Stigma divided into two acute, recurved points. Seeds four, oval, in the bottom of the closed calyx.

P. vulgáris. Self-heal. All the leaves between oblong and egg-shaped, stalked; teeth of the upper lip of the calyx very minute.——Stem from four to eight inches high, erect, leafy, downy, branched below, terminating in dense whorled spikes, of deep purple flowers, each whorl with two broad obtuse bracteas. Perennial: flowers in July and August: grows in meadows and pastures; common. *Engl. Bot.* vol. xiv. pl. 961. *Engl. Fl.* vol. iii. p. 114.

ANGIOSPERMIA.

21. BA'RTSIA.

Calyx of one leaf, tubular, coloured, with four acute, nearly equal, marginal segments. Corolla gaping, a little compressed; tube short; throat funnel-shaped; upper lip longer, concave, undivided; lower lip reflected, deeply divided into three nearly equal lobes. Filaments thread-shaped, incurved. Anther two-celled, a little hairy, collected under the upper lip. Germen simple, egg-shaped, acute. Style thread-shaped, curved. Stigma obtuse. Capsule egg-shaped, pointed, compressed, two-celled, two-valved; the partition contrary to the valves. Seeds numerous, small, angular.

B. alpina. Alpine Bartsia. Leaves opposite, egg-shaped, obtusely serrate; stem square; root creeping.——Stems from four to eight inches high, simple, hairy: leaves sessile in pairs on the opposite sides of the stem, somewhat heart-shaped: flowers axillar, forming a close leafy spike: corolla purplish-blue: calyx purplish. Perennial: flowers in July: grows in elevated watery places, in the Highlands of Scotland and the north of England. *Engl. Bot.* vol. vi. pl. 361. *Engl. Fl.* vol. iii. p. 117.

B. viscósa. Yellow Bartsia. Leaves lance-shaped, serrate, the upper alternate; flowers lateral and distant; stem round; root fibrous. ——Stem erect, downy, about a foot high: corolla yellow, with purple stains. Annual: flowers in July and August: grows in marshy ground, along the west coast; rare. *Engl. Bot.* vol. xv. pl. 1045. *Engl. Fl.* vol. iii. p. 118.

B. Odontites. Red Bartsia. Leaves lance-shaped, serrate, the upper alternate; flowers in unilateral clusters; stem square, branched. ——Stem from six inches to a foot high, branched, the branches terminating in a leafy cluster of numerous rose-coloured flowers. Perennial: flowers in July and August: grows in moist meadows and pastures, and in corn-fields and by road-sides; common. *Engl. Bot.* vol. xx. pl. 1415. *Engl. Fl.* vol. iii. p. 119.

22. RHINA'NTHUS.

Calyx of one leaf, roundish, inflated, compressed, with four nearly equal, acute marginal teeth. Corolla gaping; tube nearly cylindrical, as long as the calyx; upper lip narrower, helmet-shaped, compressed, slightly cleft; lower lip broader, expanded, deeply divided into three obtuse segments, the middle one somewhat larger. Filaments thread-shaped, shorter than the upper lip, and concealed by it. Anthers two-lobed, hairy. Germen egg-shaped, compressed, with a channel at each side. Style thread-shaped, curved, a little longer than the stamens. Stigma obtuse, bent inwards. Capsule roundish, compressed, with a small point, two-celled, two-valved; partitions transverse, united. Seeds *compressed*, imbricated, bordered.

R. Crista-gálli. Yellow Rattle. Stem branched, leaves lance-shaped, serrate; calyx smooth; seeds with a dilated membranous border.——Stem about a foot high, generally with few branches, sometimes bushy: leaves rough, wrinkled: flowers axillar, crowded into a leafy spike: calyx membranous: corolla yellow: the ripe seeds rattle in the capsule. Annual: flowers in June: grows in pastures; common. *Engl. Bot.* vol. x. pl. 657. *Engl. Fl.* vol. iii. p. 120.

23. EUPHRA'SIA.

Calyx of one leaf, tubular, cylindrical, ribbed, with four deep, equal, pointed, marginal teeth. Corolla gaping; tube as long as the calyx, cylindrical: upper lip slightly concave, crenate; lower lip divided into three deep, unequal, obtuse, cleft or notched segments. Filaments thread-shaped, directed towards the upper lip. Anthers large, of two lobes, pointed at the base, the points of the lower anthers elongated into straight bristles. Germen egg-shaped. Style thread-shaped, as long as the stamens. Stigma obtuse. Capsule oblong, obtuse, compressed, two-celled, two-valved. Seeds minute, elliptical, compressed, furrowed.

E. officinális. Eye-bright. Leaves egg-shaped, furrowed, deeply toothed.——About four inches high, with a square, generally branched leaf: flowers axillar, solitary: corolla white, streaked with purple, yellowish on the palate. Annual: flowers from July to September: grows in pastures, abundantly. *Engl. Bot.* vol. xx. pl. 1416. *Engl. Fl.* vol. iii. p. 122.

24. MELAMPY'RUM.

Calyx of one leaf, tubular, with four deep, straight, unequal, marginal segments. Corolla gaping; tube oblong, curved; throat a little dilated, compressed; upper lip vaulted, compressed, notched, reflected at the edge on both sides; lower lip slightly plaited, with two prominences on the palate, divided into three nearly equal, obtuse segments. Filaments awl-shaped, incurved, concealed under the upper lip. Anthers oblong, two-lobed. Germen egg-shaped, pointed. Style thread-shaped, as long as the stamens. Stigma obtuse. Capsule oblong, obliquely pointed, compressed, its upper edge convex, the lower straight, two-celled, two-valved, the partitions transverse. Seeds two in each cell, egg-shaped, obtuse.

M. cristátum. Crested Cow-wheat. Spikes four-cornered; bracteas heart-shaped, closely imbricated, finely toothed.——Stems a foot high, or more, leafy, roughish: leaves nearly linear, rough on the edges: bracteas pectinate: flowers variegated with cream-colour and light purple, the palate yellow. Annual: flowers in July: grows in woods and thickets in some parts of England. *Engl. Bot.* vol. i. pl. 41. *Engl. Fl.* vol. iii. p. 123.

M. arvénse. Purple Cow-wheat. Spikes conical; bracteas loose, lance-shaped, pinnatifid.——Stem from one and a half to two feet high, acutely *four-cornered*: leaves lance-shaped, rough on the edges:

bracteas loosely spreading: flowers large, with a yellow corolla, its lips variegated with pale red and purple. Annual: flowers in July: grows in corn-fields in Norfolk. *Eng. Bot.* vol. i. pl. 53. *Eng. Fl.* vol. iii. p. 154.

M. praténse. Common Yellow Cow-wheat. Flowers axillar, pointing one way; corolla closed, lower lip straight out; upper floral leaves toothed at the base.——Stem smooth, branched: leaves lance-shaped, pointed, smooth, entire; the uppermost toothed, sometimes pinnatifid at the base: flowers solitary, opposite: corolla pale at the base, deep yellow towards the top, with a purple spot at each side of the mouth. Annual: flowers in July and August: grows in woods, bushy places, heaths, and pastures. *Eng. Bot.* vol. ii. pl. 113. *Eng. Fl.* vol. iii. p. 125.

M. sylváticum. Wood Cow-wheat. Flowers axillar, in distant pairs, pointing one way; corolla open, with the lower lip bent downward; leaves nearly all entire.——This resembles the last, but is smaller: corolla smaller, deep yellow, with some red spots about the mouth. Annual: flowers in July and August: grows in elevated woods. *Engl. Bot.* vol. xii. pl. 804. *Eng. Fl.* vol. iii. p. 126.

25. LATHRÆ'A.

Calyx of one leaf, bell-shaped, with four deep, erect, nearly equal marginal segments. Corolla gaping: tube longer than the calyx, limb tumid: upper lip vaulted, acute; lower lip smaller, spreading, obtuse. Nectary a notched, depressed, very short gland, placed on the receptacle, at the lower side of the germen. Filaments awl-shaped, shorter than the corolla, concealed by its upper lip. Anthers obtuse, coming together. Germen roundish, compressed. Style cylindrical, as long as the stamens. Stigma abrupt, notched, bent downwards. Capsule roundish, obtuse, with a small point, one-celled, two-valved, invested by the enlarged calyx. Seeds numerous, roundish, attached to a spongy, longitudinal receptacle in the middle of each valve.

L. Squamária. Greater Tooth-wort. Stem simple; flowers pendulous, their lower lip three-cleft.——Stem rounded, six or eight inches high: leaves egg-shaped, thick, entire, smooth, cream-coloured, imbricated: flowers axillar, solitary: corolla dull purple, its upper lip deeply cleft. Perennial: flowers in April: grows in shady places, parasitic on the roots of trees. *Engl. Bot.* vol. i. pl. 50. *Eng. Fl.* vol. iii. p. 157.

26. PEDICULA'RIS.

Calyx of one leaf, with a roundish, tumid, somewhat compressed tube, with five, sometimes only two, unequal, leafy, jagged segments. Corolla gaping: tube oblong, unequal; upper lip narrower, erect, vaulted, compressed, notched; lower lip dilated, flat, deeply divided into three obtuse segments, the middle one narrower. Nectary a gland under the germen. Filaments thread-shaped, concealed by the upper lip. Anthers two-lobed, acute at the lower part, compressed. Germen egg-shaped. Style thread-shaped, longer than the stamens. Stigma

simple, bent downwards. Capsule oblong, pointed, oblique, two-celled, two-valved, the partitions from the centre of each valve. Seeds few, angular, pointed, attached to a nearly globular receptacle at the base.

P. palústris. Marsh Louse-wort. Stem solitary, branched; calyx egg-shaped, hairy, ribbed, with two unequally notched lobes.——Stem erect, a foot high, much branched: leaves stalked, doubly pinnatifid: flowers axillar, opposite, solitary, rose-coloured. Annual: flowers in June and July: grows in marshes and wet pastures; common. *Eng. Bot.* vol. vi. pl. 399. *Engl. Fl.* vol. iii. p. 129.

P. sylvática. Common Louse-wort. Stems several, spreading, simple: calyx oblong, angular, smooth, with five unequal notched segments.——Stems about eight inches long, the central one erect, the others spreading: leaves twice pinnatifid, root-leaves egg-shaped, undivided, crenate; flowers bright rose-coloured. Perennial: flowers in July: grows in moist heathy pastures; common. *Eng. Bot.* vol. vi. pl. 400. *Engl. Fl.* vol. iii. p. 129.

27. ANTIR'RHINUM.

Calyx of one leaf, divided into five deep, oblong, permanent segments; the two lower more distant from each other. Corolla gaping: tube oblong, tumid or elongated into a spur; upper lip cleft, reflected at the sides: lower lip obtuse, three-lobed, with an elevated palate, closing the mouth, and hollow beneath. Filaments concealed by the upper lip. Anthers approaching each other. Germen roundish or egg-shaped. Style thread-shaped, as long as the stamens. Stigma obtuse. Capsule roundish or oval, obtuse, two-celled. Seeds numerous, roundish, or angular, attached to an oblong, cylindrical receptacle, in the middle of the partition.

* *Corolla spurred; leaves broad; stems weak.*

A. Cymbalária. Ivy-leaved Snap-dragon. Leaves heart-shaped, five-lobed, alternate; stems procumbent.——Stems procumbent or pendulous, round, smooth, leafy: leaves alternate, stalked, shining: flowers pale purple, with a yellow palate, and short pointed spur. Perennial: flowers from May to November: grows on old walls. *Engl. Bot.* vol. vii. pl. 502. *Engl. Fl.* vol. iii. p. 131.

A. spúrium. Round-leaved Snap-dragon. Leaves egg-shaped, downy, alternate; stems procumbent, hairy.——Stems branched, leafy: leaves mostly alternate, the lowermost only opposite: flowers on slender, axillar stalks: corolla with a recurved greenish spur, the upper lip purple, the lower yellow, with an orange palate. Annual: flowers from July to September: grows in corn-fields; rare. *Engl. Bot.* vol. x. pl. 691. *Engl. Fl.* vol. iii. p. 131.

A. Elatíne. Sharp-pointed Snap-dragon. Leaves halberd-shaped, alternate, the lowest egg-shaped, opposite; stems procumbent, hairy.——Upper lip of the corolla yellow, lower lip edged with deep purple. Annual: flowers from July to September: grows in corn-fields. *Engl. Bot.* vol. x. pl. 692. *Engl. Fl.* vol. iii. p. 132.

** *Corolla spurred; leaves narrow; stems erect.*

A. répens. Creeping Pale-blue Toad-flax. Leaves linear, glaucous, scattered; calyx smooth, as long as the spur.——Smooth and glaucous: root creeping: stems about a foot high, numerous, branched and panicled: leaves entire, erect, the upper alternate: flowers numerous, in panicled clusters: spur conical, pale grey; lower lip of the same colour; palate yellow; upper lip and tube striped with blue. Perennial: flowers from July to September: grows on dry banks and on rocks near the sea, in the south-west of England and in Wales. *Engl. Bot.* vol. xviii. pl. 1253. *Engl. Fl.* vol. iii. p. 133.

A. Linária. Common Yellow Toad-flax. Leaves between lance-shaped and linear, crowded; spikes terminal; flowers imbricated; calyx smooth, shorter than the spur.——The whole plant smooth: stems two feet high, densely covered with narrow acute leaves, with a terminal dense spike of yellow flowers, having an orange-coloured palate. A variety occurs with a regular five-cleft, five-spurred corolla. Perennial: flowers in June and July: grows in hedges, and at the edges of fields; common. *Engl. Bot.* vol. x. pl. 658. *Var.* vol. iv. pl. 260. *Engl. Fl.* vol. iii. p. 134.

A. minus. Least Snap-dragon. Leaves lance-shaped, obtuse, downy, alternate; stems much branched, spreading; calyx longer than the spur.——Whole plant downy and clammy; stem from six to twelve inches high: flowers small, on long solitary, axillar stalks: tube, upper lip and spur purplish, lower lip white, with yellow palate. Annual: flowers from June to September: grows in sandy fields. *Eng. Bot.* vol. xxviii. pl. 2014. *Engl. Fl.* vol. iii. p. 135.

*** *Corolla without a spur.*

A. május. Great Snap-dragon. Corolla with a rounded prominence at the base; flowers in a dense cluster; leaves lance-shaped; segments of the calyx egg-shaped, obtuse.——Stem branched, leafy, downy and clammy: leaves opposite or alternate, acute, recurved, smooth: flowers large, rose-coloured, with a large yellow palate, white in front. Perennial: flowers in June and July: grows on old walls. *Engl. Bot.* vol. ii. pl. 129. *Engl. Fl.* vol. iii. p. 135.

A. Orontium. Lesser Snap-dragon. Corolla with scarcely any prominence at the base; flowers loosely spiked; calyx finger-shaped, longer than the corolla.——Stem about a foot high, branched, leafy: leaves lance-shaped, somewhat stalked, alternate: flowers axillar, nearly sessile: corolla rose-coloured, with a yellow palate. Annual: flowers in July and August: grows in dry sandy fields. *Engl. Bot.* vol. xvii. pl. 1155. *Engl. Fl.* vol. iii. p. 136.

28. SCROPHULA'RIA.

Calyx of one leaf, with five rounded, somewhat unequal, marginal segments, much shorter than the corolla. Corolla tubular, unequal, reversed: tube egg-shaped, large, inflated; limb very small, divided into five deep segments, the upper short, slightly notched, reflected, two lateral ones spreading, two lower largest, erect, often accompanied by a small internal lobe. Filaments declining, nearly as long as the

corolla. Anthers terminal, two-celled. Germen egg-shaped. Style simple, as long as the stamens. Stigma simple. Capsule egg-shaped or globular, pointed, two-celled, two-valved; the partition formed by the edge of the valves turned in. Seeds numerous, small, attached to a globose central receptacle.

S. nodósa. Knotted-rooted Figwort. Leaves heart-shaped, acute; serrate, smooth; corners of the stem acute; root tuberous.——Stem from two to three feet high, nearly simple, smooth: leaves stalked, unequally serrate: flowers in a panicled, leafy cluster, with a dull green corolla, having a livid purple lip. The whole plant emits a fetid nauseating smell. Perennial: flowers in June and July: grows in woods and shady places. *Engl. Bot.* vol. xxii. pl. 1544. *Engl. Fl.* vol. iii. p. 137.

S. aquática. Water Figwort. Leaves heart-shaped, bluntish, decurrent on their stalks; stem winged; root fibrous.——Stem about three feet high, with membranous angles: cluster of many forked branches, with numerous flowers, with the tube green, and the limb dark red: fetid like the last. Perennial: flowers in July: grows in watery places. *Engl. Bot.* vol. xii. pl. 854. *Engl. Fl.* vol. iii. p. 138.

S. Scorodónia, Balm-leaved Figwort. Leaves heart-shaped, doubly serrate, downy beneath; cluster leafy.——Stems about three feet high, branched, bluntly four-cornered, covered with soft spreading hairs: flowers on axillar downy stalks, forming a leafy cluster: tube of the corolla pale, lower lip dull purple. Perennial: flowers in July and August: grows on the banks of rivulets in Jersey and Cornwall. *Engl. Bot.* vol. xxxi. pl. 2209. *Engl. Fl.* vol. iii. p. 139.

S. vernális. Yellow Figwort. Leaves heart-shaped, doubly serrate, downy; flower-stalks axillar, solitary, forked, leafy; corolla without an internal lobe.——The whole plant downy: stem about two feet high, with slightly winged corners: leaves opposite, the uppermost alternate, stalked, acute: flowers pale yellow. Biennial: flowers in April and May: grows in hedges and thickets; rare. *Engl. Bot.* vol. viii. pl. 567. *Engl. Fl.* vol. iii. p. 139.

DIGITA'LIS.

Calyx of one leaf, deeply divided into five roundish, acute segments, the upper narrower. Corolla bell-shaped: tube large, cylindrical at the base, dilated and bulging upwards; limb small, with four unequal segments, the upper recurved and slightly cleft, the lower largest. Filaments awl-shaped, arising from the tube of the corolla, declining. Anthers cleft, acute. Style thread-shaped, as long as the stamens. Stigma cleft, acute. Capsule egg-shaped, pointed, two-celled, two-valved, with a double partition formed by the inflected margins of the valves.

D. purpúrea. Foxglove. Segments of the calyx egg-shaped, acute; corolla obtuse, its upper lobe scarcely cleft; leaves egg-shaped, downy.——Stem erect, from two to four feet high: leaves alternate, crenate, wrinkled and veined: cluster terminal, erect, simple, with numerous large, pendulous, crimson flowers, elegantly mottled, and hairy within.

Infusion and tincture of the leaves are used in dropsy and for diminishing the rapidity of the pulse in inflammations. This is one of the most elegant and showy of our native plants. Biennial: flowers in June and July: grows in dry hilly pastures, on the steep banks of rivers, in rocky places, &c.; common. *Engl. Bot.* vol. xix. pl. 1297. *Engl. Fl.* vol. iii. p. 140.

30. LINNÆ'A.

Calyx double: that of the fruit inferior, four-leaved, the inner leaves minute, acute, smooth, the two outer much larger, elliptical, glandular; that of the flower superior, of one leaf, deeply divided into five erect, lance-shaped, acute, equal segments. Corolla of one petal, bell-shaped, with the tube cylindrical, dilated upwards, about twice as long as the upper calyx, the limb divided into five nearly equal, spreading segments. Filaments awl-shaped, arising from the base of the corolla, shorter than its limb. Anthers oblong, compressed. Germen globular, three-celled. Style cylindrical, as long as the corolla, declining. Stigma obtuse. Berry dry, oblong, one-celled, invested by the lower calyx, and crowned by the upper. Seed solitary, oblong.

L. borealis. Two-flowered Linnæa.——Root fibrous: stems prostrate and creeping, forming large patches: leaves opposite, stalked, egg-shaped, slightly hairy: flowering branches axillar, erect, bearing two pendulous whitish flowers. Perennial: flowers in May and June: grows in dry fir woods, in various parts of Scotland. First found by Professor James Beattie, junior, at Inglesmaldie in Mearns-shire; Hill of Kinnoull, near Perth; Kenmay, near Aberdeen; in a wood near Fintray-house, on the river Don; many other woods in Aberdeenshire; Knock of Alves, near Elgin; Drummond Wood, near Inverness. *Engl. Bot.* vol. vii. pl. 433. *Engl. Fl.* vol. iii. p. 190.

31. SIBTHO'RPIA.

Calyx top-shaped, with five deep, egg-shaped, nearly equal, spreading segments. Corolla irregularly wheel-shaped, as long as the calyx, with a very short tube, its limb divided into five deep egg-shaped spreading segments, the two lower smallest. Filaments shorter than the corolla, almost equal, awl-shaped, spreading laterally, and coming together in parts. Anthers oblong, two-lobed. Germen rounded, compressed. Style cylindrical, as long as the filaments. Stigma knobbed, flattened. Capsule inversely heart-shaped, compressed, two-celled, two-valved, each valve with a narrow transverse partition. Seeds few, egg-shaped, attached to a central globular receptacle.

S. europæ'a. Cornish Money-wort.——Stems numerous, a foot long, thread-like, prostrate: leaves stalked, kidney-shaped, bluntly crenate: flowers on short axillar, simple stalks: corolla small, whitish. Perennial: flowers in July and August: grows in moist shady places in Cornwall and Devonshire. *Engl. Bot.* vol. x. pl. 649. *Engl. Fl.* vol. iii. p. 143.

32. LIMOSE'LLA.

Calyx of one leaf, with five shallow, acute, erect, lance-shaped segments. Corolla bell-shaped, erect, equal, with a cylindrical tube and five small, acute segments. Filaments awl-shaped, arising from the mouth of the tube, almost equal, approaching each other in pairs. Anthers roundish, two-lobed. Germen egg-shaped, obtuse. Style tapering, short. Stigma globose, cleft. Capsule egg-shaped, two-celled, two-valved; the partition from the inflected margin of the valves. Seeds numerous, oblong, furrowed, attached to a large, egg-shaped central receptacle.

L. aquática. Mudwort. Leaves lance-shaped.——Root fibrous, throwing out long naked runners: leaves of long stalks: flowers on shortish axillar stalks: corolla whitish. Annual: flowers in July and August: grows in muddy places, which have been covered by water. *Engl. Bot.* vol. v. pl. 357. *Engl. Fl.* vol. iii. p. 145.

33. OROBA'NCHE.

Calyx of two opposite, acute, permanent leaves. Corolla gaping, withering: tube egg-shaped, curved; upper lip concave, notched: lower lip reflected, with three unequal lobes. Nectary a gland under the germen. Filaments awl-shaped, concealed under the upper lip. Anthers two-lobed, rounded at the top, pointed below. Germen oblong. Style cylindrical, incurved, as long as the stamens. Stigma large, with two or three globular lobes. Capsule egg-shaped, pointed, one-celled, two-valved. Seeds very numerous, minute, covering the two longitudinal receptacles.

O. májor. Greater Broom-rape. Stem simple: corolla inflated, its upper lip slightly notched, the lower with acute, nearly equal segments; stamens smooth, style downy.——Stem about a foot high, erect, dusky, fleshy, covered with short, glandular hairs, and scattered, lance-shaped, erect scales: spike terminal, of about twenty flowers, with a purplish brown corolla. Perennial: flowers in June and July: grows in gravelly soil, on the roots of broom and furze. *Engl. Bot.* vol. vi. pl. 421. *Engl. Fl.* vol. iii. p. 146.

O. slátior. Tall Broom-rape. Stem simple; corolla funnel-shaped, its lower lip with segments; stamens downy; style smooth.——Perennial: flowers in July and August: grows on gravelly soil, but not on the roots of broom or furze. *Engl. Bot.* vol. viii. pl. 568. *Engl. Fl.* vol. iii. p. 147.

O. minor. Less Broom-rape. Stem simple; corolla nearly cylindrical, its lower lip with curled segments, the middle one largest and lobed: stamens fringed: style smooth.——Perennial: flowers in July and August; grows in clover-fields in England and Wales. *Engl. Bot.* vol. vi. pl. 422. *Engl. Fl.* vol. iii. p. 148.

O. rúbra. Red Broom-rape. Stem simple; corolla somewhat tumid; upper lip cleft, lower in three nearly equal obtuse lobes; stamens fringed; style partially hairy.—Stem about eight inches high, simple, swelled at the lower part, purplish-red, tinged with

yellow: scales dark brown: calyx leaves lance-shaped: spike of rather close flowers, dusky red. The whole plant, excepting the scales is covered with very short glandular hairs. Annual: flowers in July: grows in gravelly soil, in rocky places, in Scotland: near Seafield Tower, on the coast of Fife; Island of Staffa, on Basaltic rocks; island of Harris, at Craig-camna, on Gneiss.

O. cærúlea. *Purple Broom-rape.* Stem simple; bracteas three; upper lip of the corolla cleft and notched, lower in three equal lance-shaped segments; style downy.——Stem a foot high, dark-grey, angular: scales brown: calyx-leaves united, cleft: corolla funnel-shaped, greyish-purple: filaments smooth. The whole plant minutely downy. Perennial: flowers in July: grows in grassy pastures near the sea, the root parasitical on other plants. *Engl. Bot.* vol. vi. pl. 423. *Engl. Fl.* vol. iii. p. 149.

O. ramósa. *Branched Broom-rape.* Stem branched; bracteas three; upper lip of the corolla deeply cleft, lower with three equal lobes, all the segments rounded; style smoothish.——Flowers light purple, in a loose spike. Annual: flowers in August and September: grows in moist fields, parasitical on the roots of hemp. *Engl. Bot.* vol. iii. pl. 184. *Engl. Fl.* vol. iii. p. 150.

Class XV. TETRADYNAMIA.

Plants bearing Flowers with Six Stamens, of which four are longer than the other two.

(*The flowers have invariably four petals.*)

Order I. SILICULOSA. *Seeds inclosed in a short pod or pouch.*

* *Pouch entire at the top.*

3. DRA'BA. *Pouch* entire, oval; valves nearly flat. *Seeds* numerous.
2. VE'LLA. *Pouch* entire; valves concave. *Style* dilated, flat, nearly twice as long as the *pouch*.
6 HUTCHI'NSIA. *Pouch* entire; valves keeled, not bordered. *Seeds* at least two in each cell.
4. ALY'SSUM. *Pouch* entire, bordered, laterally compressed, with concave valves. *Seeds* one or two in each cell.
11. COCHLEA'RIA. *Pouch* nearly entire, turgid, wrinkled, two-valved. *Seeds* numerous.
1. SUBULA'RIA. *Pouch* entire, transversely compressed, with tumid valves. *Seeds* numerous.
5. CAMELI'NA. *Pouch* entire, with tumid valves. *Seeds* numerous.
12. SENEBIE'RA. *Pouch* nearly entire, transversely compressed, wrinkled, two-celled, two-valved. One *seed* in each cell.
13. CRAM'BE. *Pouch* globose, stalked, leathery, one-celled, without valves, deciduous. *Seed* solitary.

14. CAKI'LE. *Pouch* angular, of two one-seeded joints, the upper deciduous.

** *Pouch notched at the top.*

10. IBE'RIS. *Pouch* cleft, inversely heart-shaped. One *Seed* in each cell. Two outer *Petals* largest.
9. TEESDA'LIA. *Pouch* cleft, inversely heart-shaped, with keeled valves. *Seeds* two in each cell. *Filaments* bearing a scale at the base.
8. THLA'SPI. *Pouch* cleft, inversely heart-shaped; valves with a bordered keel. *Seeds* numerous.
7. LEPI'DIUM. *Pouch* cleft, elliptical, two-celled; valves keeled. One *seed* in each cell.

Order II. SILIQUOSA. *Seeds inclosed in a long Pod.*

16. CARDAMI'NE. *Pod* linear: valves flat, without ribs, narrower than the partition. *Seeds* in two rows, on hair-like stalks.
15. DANTA'RIA. *Pod* lance-shaped; valves flat, without ribs, narrower than the partition. *Seeds* on flat dilated stalks.
17. A'RABIS. *Pod* linear; valves flat, veined or ribbed. *Seeds* in one row.
18. TURRI'TIS. *Pod* linear; valves flat, keeled. *Seeds* in two rows.
19. NASTURTIUM. *Pod* nearly cylindrical; valves concave, without keels. *Stigma* obtuse, notched. *Calyx* spreading.
20. SISYMBRIUM. *Pod* nearly cylindrical. *Stigma* knobbed, notched. *Calyx* spreading.
21. MATTHI'OLA. *Pod* nearly cylindrical, straight. *Stigma* of two converging lobes. *Calyx* closed, two of its leaves prominent at the base.
22. BARBA'REA. *Pod* four-cornered, two-edged. *Seeds* in one row. *Calyx* erect. Glands at the inside of the shorter *filaments*.
23. ERY'SIMUM. *Pod* four-cornered. *Stigma* knobbed, notched. *Calyx* closed.
24. HES'PERIS. *Pod* four-cornered. *Stigma* with two converging lobes. *Calyx* closed, with two protuberances at the base.
25. CHEIRAN'THUS. *Pod* compressed or two-edged. *Stigma* knobbed or with two spreading lobes. *Calyx* closed; two of its leaves prominent at the base.
26. BRAS'SICA. *Pod* nearly cylindrical, beaked, two-valved. *Seeds* nearly globular. *Calyx* closed.
27. SINA'PIS. *Pod* nearly cylindrical, somewhat beaked, two-valved. *Seeds* nearly globular. *Calyx* spreading.
28. RA'PHANUS. *Pod* with imperfect bulging joints, without valves. *Seeds* globular.

TETRADYNAMIA.—SILICULOSA.

1. SUBULARIA.

Calyx erect, deciduous, of four equal, oval leaves. Petals four, inversely egg-shaped, entire, their claws shorter than the calyx. Filaments simple. Anthers two-lobed. Germen egg-shaped, compressed. Style none. Stigma obtuse. Pouch egg-shaped, transversely compressed,

entire, two-celled, two-valved; the valves deeply concave; partition membranous, elliptical, parallel to the valves, crossing the narrowest diameter of the pouch. Seeds egg-shaped, four or more in each cell.

S. aquática. Water Awl-wort. Root of numerous white fibres: leaves awl-shaped, spreading: flowers in a simple, stalked cluster, arising from the root: petals white. Annual: flowers in July: grows in shallow water, in sand or gravel, near the edges of lakes: Loch Tay, Loch Lomond, Loch of Clunie, Loch Langavat in Harris. *Engl. Bot.* vol. xi. pl. 732. *Engl. Fl.* vol. iii. p. 157.

2. VEL'LA.

Calyx of four erect, oblong, acute leaves. Petals four, inversely egg-shaped, undivided, their claws as long as the calyx. Filaments awl-shaped, four longer than the calyx. Anthers heart-shaped, bluntish. Germen egg-shaped. Style erect, dilated, elliptical, longer than the germen. Stigma obtuse. Pouch egg-shaped, terminated by the permanent style, with concave valves, and a membranous partition. Seeds globose, pendulous, few in each cell.

V. ánnua. Annual Cress-rocket. Leaves twice pinnatifid; pouches deflected.——Stem erect, much branched, rough with deflected bristles, leafy: flowers pale-yellow with purplish veins: seeds four in each cell. Annual: flowers in June: grows in sandy fields: found on Salisbury plain, by Mr. Lawson. *Engl. Bot.* vol. xxi. pl. 1442. *Engl. Fl.* vol. iii. p. 156.

3. DRA'BA.

Calyx of four, somewhat spreading, egg-shaped valves, equal at the base. Petals spreading, with short claws. Filaments awl-shaped. Anthers two-lobed. Germen egg-shaped. Style very short. Stigma knobbed, flat. Pouch oblong, compressed, entire, two-celled; the valves nearly flat; partition membranous. Seeds several in each cell, small, roundish.

D. vérna. Common Whitlow-grass. Scapes radical, leafless; petals deeply cleft; leaves lance-shaped, toothed, hairy.——Leaves arranged in a star-like form on the ground: flowers white, in a corymbose cluster. Annual: flowers in March and April: grows on walls and dry loose soil; common. *Engl. Bot.* vol. ix. pl. 586. *Engl. Fl.* vol. iii. p. 158.

D. hírta. Hairy Whitlow-grass. Scape nearly leafless; petals undivided; leaves lance-shaped, slightly toothed, fringed with simple hairs.——Stalk solitary, two or three inches high, round, leafless, or with a single leaf near the bottom: flowers small, white, in a dense corymb. Perennial: flowers in May and June: found on Ben Lawers by Mr. Dickson and Mr. G. Don. *Engl. Bot.* vol. xix. pl. 1338. *Engl. Fl.* vol. iii. p. 159.

D. incána. Twisted-podded Whitlow-grass. Stem-leaves numerous, lance-shaped, hoary, like the stem, with starry hairs; pouch oblong, *oblique* or twisted, longer than the hairy flower-stalks.——Stem *from* two to twelve inches high. Root-leaves arranged in a star-

like form: flowers numerous, white, with inversely heart-shaped petals. Biennial: flowers in May and June: grows in rocky places, on the mountains of Scotland, Wales, and the north of England. *Engl. Bot.* vol. vi. pl. 388. *Engl. Fl.* vol. iii. p. 160.

D. murális. Speedwell-leaved Whitlow-grass. Stem branched; leaves heart-shaped, toothed, hairy; pouch elliptical, obtuse, flat, shorter than the partial stalks.——Stem erect, about a foot high, leafy, rough with starry hairs: flowers very numerous, small, white. Annual: flowers in April and May: grows on walls. *Engl. Bot.* vol. xiii. pl. 912. *Engl. Fl.* vol. iii. p. 161.

4. ALYSSUM.

Calyx of four egg-shaped equal leaves. Petals egg-shaped, flat, spreading, with short claws. Filaments about the length of the calyx. Anthers two-lobed. Germen round or elliptical, compressed. Style short. Stigma small, simple. Pouch round, oval, or inversely egg-shaped, compressed, two-celled; valves flattish; partition membranous. Seeds one or two in each cell, oval, compressed.

A. maritimum. Sweet Alyssum. Stem somewhat woody, much branched; leaves lance-shaped, acute, entire, hoary with close hairs; seeds solitary.——Flowers abundant, in dense corymbose clusters: petals white. Perennial: flowers in August and September: grows on banks and rocks near the sea: found near Aberdeen, by Professor Duncan. *Engl. Bot.* vol. xxv. pl. 1729. *Engl. Fl.* vol. iii. p. 163.

5. CAMELI'NA.

Calyx of four oblong, equal, spreading, deciduous leaves. Petals oblong, undivided, with shortish claws. Filaments thread-shaped. Anthers heart-shaped. Germen roundish. Style cylindrical, erect. Stigma obtuse. Pouch inversely egg-shaped, two-celled, the valves concave, the partition membranous. Seeds numerous in each cell, oblong, compressed.

C. sativa. Gold of Pleasure. Pouches inversely heart-shaped, bordered twice the length of the style: leaves lance-shaped, arrow-shaped at the base.——Stem erect, about two feet high: flowers small, pale yellow. Annual: flowers in June: grows in cultivated ground, chiefly among flax. *Engl. Bot.* vol. xviii. pl. 1254: *Alyssum sativum. Engl. Fl.* vol. iii. p. 164.

6. HUTCHI'NSIA.

Calyx of four, elliptical, equal, spreading, deciduous leaves. Petals inversely egg-shaped, entire. Filaments awl-shaped. Anthers roundish. Germen oval, compressed. Style compressed. Stigma obtuse. Pouch elliptical, compressed, nearly entire, two-celled; valves keel-shaped; partition narrow, crossing the greater diameter of the pouch. Seeds two or more in each cell, egg-shaped.

H. petræ'a. Rock Hutchinsia. Leaves pinnate, entire; petals scarcely as long as the calyx; stigma sessile; seeds two in each cell.——Stems two or three inches high, erect, branched: flowers minute, white, corymbose. *Annual: flowers* in March and April: grows on rocks and

walls in the south of England, and in Wales. *Engl. Bot.* vol. ii. pl. 211: *Lepidium petræum. Engl. Fl.* vol. iii. p. 168.

7. LEPI'DIUM.

Calyx of four egg-shaped, concave, deciduous leaves. Petals inversely egg-shaped, undivided, with narrow claws. Filaments awl-shaped, as long as the calyx. Anthers two-lobed. Germen roundish. Style slender. Stigma obtuse. Pouch round or oblong, compressed, notched at the top, two-celled; the valves keel-shaped; partition very narrow, crossing the greater diameter of the pouch. Seeds one in each cell, egg-shaped.

L. latifólium. Broad-leaved Pepper-wort. Leaves between lance-shaped and egg-shaped, undivided, serrate.——Stems three feet high, branched: flowers numerous, very small, white, in compound leafy panicled clusters. Perennial: flowers in July: grows in marshes and meadows near the sea. *Engl. Bot.* vol. iii. pl. 182. *Engl. Fl.* vol. iii. p. 165.

L. ruderâle. Narrow-leaved Pepper-wort. Lower leaves pinnatifid, toothed; upper linear, entire; stamens two; petals none.——The whole plant smooth, glaucous: stem about ten inches high: flowers sometimes have the petals. Annual: flowers in June: grows in waste ground. *Engl. Bot.* vol. xxiii. pl. 1595. *Engl. Fl.* vol. iii. p. 166.

L. campéstre. Mithridate Pepper-wort. Pouch covered with minute scales, notched, bordered at the top; style very short; stem-leaves arrow-shaped, toothed.——More or less downy and glaucous: lowest leaves inversely egg-shaped: flowers numerous, small, white, corymbose. Annual: flowers in July: grows in cultivated fields. *Engl. Bot.* vol. xx. pl. 1385: *Thlaspi campestre. Engl. Fl.* vol. iii. p. 166.

L. hirtum. Hairy Mithridate Mustard. Pouch egg-shaped, notched, not scaly, bordered at the top; style prominent; stem-leaves arrow-shaped, toothed.——Stems hairy, from six to eight inches high: flowers white. Perennial: flowers in June: grows on the edges of fields. *Engl. Bot.* vol. xxvi. pl. 1803: *Thlaspi hirtum. Engl. Fl.* vol. iii. p. 167.

8. THLA'SPI.

Calyx of four egg-shaped, concave, spreading, equal leaves. Petals egg-shaped, equal, undivided, with short claws. Filaments slender. Anthers heart-shaped, acute. Germen roundish, notched, or inversely heart-shaped. Style short. Stigma obtuse. Pouch compressed, roundish or inversely heart-shaped, two-celled; valves keeled, generally bordered; partition elliptical, crossing the greater diameter of the pouch. Seeds egg-shaped, several in each cell.

T. arvénse. Mithridate Mustard. Penny-cress. Pouch round, nearly flat, shorter than its stalk; leaves smooth, oblong, toothed.——About a foot high, branched, smooth: flowers small, white, in dense corymbs: pouches very large, with a deep notch. The seeds have a strong flavour of garlic. Annual: flowers in June and July: grows in cultivated and waste ground. *Engl. Bot.* vol. xxiv. pl. 1659. *Engl. Fl. vol. iii. p.* 171.

T. perfoliátum. Perfoliate Shepherd's-purse. Pouch inversely heart-shaped; stem-leaves heart-shaped, smooth, somewhat toothed; style very short.——Glaucous, smooth: stem branched: root-leaves stalked, egg-shaped: stem-leaves sessile, somewhat arrow-shaped: flowers small, white, densely corymbose. Perennial: flowers in April and May: grows in pastures, in Oxfordshire. *Engl. Bot.* vol. xxxiii. pl. 2354. *Engl. Fl.* vol. iii. p. 172.

T. alpéstre. Alpine Shepherd's-purse. Pouch inversely egg-shaped, abrupt, with a prominent style; stem-leaves arrow-shaped; stems simple.——Smooth and glaucous: stems about six inches high, leafy: root-leaves egg-shaped, in dense tufts: flowers small, white, with slightly notched petals. Perennial: flowers in June and July: grows in mountainous pastures, in the north of England; rare. *Eng. Bot.* vol. ii. pl. 81. *Engl. Fl.* vol. iii. p. 173.

T. Búrsa-pastóris. Common Shepherd's-purse. Pouch inversely heart-shaped, somewhat triangular; root-leaves pinnatifid, hairy.——Stem branched, about a foot high: flowers small, white, corymbose. Annual: flowers from March to November: grows in cultivated ground and by road-sides: common. *Engl. Bot.* vol. xxi. pl. 1485. *Engl. Fl.* vol. iii. p. 173.

9. TEESDA'LIA.

Calyx of four egg-shaped, concave, nearly equal, spreading leaves. Petals inversely egg-shaped, undivided, spreading, two generally much larger. Filaments cylindrical, incurved, shorter than the corolla, each bearing an egg-shaped scale on the inner side. Anthers of two round lobes. Germen roundish, two-lobed. Stigma globular, sessile. Pouch compressed, roundish, concave on one side, bordered and cleft at the top, two-celled; the valves boat-like, with dilated keels; partition lance-shaped, narrow, contrary to the greater diameter of the pouch. Seeds two in each cell, roundish, compressed.

T. nudicaúlis. Naked-stalked Teesdalia. Root-leaves pinnatifid; petals unequal.——Stems several, the central one straight and leafless: flowers white. Annual: flowers in May and June: grows in dry pastures and gravelly places; very common in many parts of Scotland. *Engl. Bot.* vol. v. pl. 327. *Engl. Fl.* vol. iii. p. 170.

10. IBE'RIS.

Calyx of four egg-shaped, concave, equal, spreading leaves. Petals inversely egg-shaped, undivided, unequal, with short claws. Filaments awl-shaped, about the length of the calyx. Anthers roundish. Germen round, compressed, notched. Style very short. Stigma obtuse. Pouch egg-shaped, compressed, bordered, two-celled, cleft into two acute lobes; valves boat-shaped, with a dilated pointed keel; partitions membranous, as wide as the valves. Seeds one in each cell, egg-shaped.

I. amára. Bitter Candy-tuft. Stem herbaceous; leaves lance-shaped, acute, partly crenate; flowers in oblong clusters.——Smooth: stems branched, leafy: flowers white. Annual: flowers in July: grows in corn-fields; rare: about Henley in Oxfordshire, and Wallingford in Berkshire. *Engl. Bot. vol. i. pl. 52. Engl. Fl. vol. iii. p. 181.*

11. COCHLEARIA.

Calyx of four egg-shaped, concave, spreading leaves. Petals inversely egg-shaped, undivided, twice the length of the calyx, with short claws. Filaments awl-shaped, incurved, as long as the calyx. Anthers roundish. Germen roundish. Styles very short, permanent. Stigma obtuse. Pouch globular, egg-shaped, or elliptical, turgid, wrinkled, veiny, two-celled; valves concave; partition round or elliptical, membranous. Seeds several in each cell, roundish.

C. officinalis. Common Scurvy-grass. Root-leaves roundish; stem-leaves oblong, somewhat sinuated; pouch globular,——Smooth and shining: stem angular, much branched, decumbent: flowers white, in numerous corymbose clusters. A variety occurs on elevated mountains, differing chiefly in its small size. Annual: flowers in May: grows abundantly on the sea-coast, and along rivers near the sea; also in rocky places of the higher mountains of Scotland and Wales. *Engl. Bot.* vol. viii. pl. 551. *Engl. Fl.* vol. iii. p. 175.

C. anglica. English Scurvy-grass. Root-leaves egg-shaped, entire; stem-leaves sessile, lance-shaped, toothed; pouch elliptical, strongly reticulated with veins. The principal difference between this and the last is in the form of the pouch. Annual: grows in muddy places on the sea-shore, and along rivers near the mouth. *Engl. Bot.* vol. viii. pl. 552. *Engl. Fl.* vol. iii. p. 176.

C. danica. Danish Scurvy-grass. Leaves all triangular and stalked; pouch elliptical.——Stems three or four inches long, spreading or prostrate: flowers white. Annual: flowers in May and June: grows on the sea-coast; rare. *Engl. Bot.* vol. x. pl. 696. *Engl. Fl.* vol. iii. p. 177.

C. Armoracia. Horse Radish. Root-leaves oblong, crenate; stem-leaves lance-shaped, cut.——Root long, cylindrical: stem two feet high, erect: flowers white. The root is pungent and used as a condiment. Perennial: flowers in May: grows in waste-ground. *Eng. Bot.* vol. xxxiii. pl. 2323. *Engl. Fl.* vol. iii. p. 178.

12. SENEBIERA.

Calyx of four egg-shaped, concave, spreading leaves. Petals egg-shaped, undivided. Filaments awl-shaped, as long as the calyx. Anthers roundish, two-lobed. Germen roundish, or two-lobed, compressed. Style very short. Stigma obtuse. Pouch roundish, compressed, two-lobed, two-celled, not bursting; valves globular or rounded, wrinkled, each lodging a solitary roundish seed.

S. Coronopus. Swine's-cress. Water-cress. Pouch undivided, crested, with little sharp points; style prominent; leaves pinnatifid, subdivided.——Root tapering: stems prostrate, branched, leafy: leaves deeply divided, smooth: flowers white, in dense corymbs. Annual: flowers from June to September: grows in waste ground and by wayside. *Engl. Bot.* vol. xxiv. pl. 1660. *Engl. Fl.* vol. iii. p. 179.

S. didyma. Less Water-cress. Pouch cleft, of two round wrinkled lobes; style very short; leaves pinnatifid, partly crenate.——Root

fibrous, small: stems procumbent, about a foot long, branched: leaves smooth, flat: flowers small, white, with two or four stamens only. Annual: flowers in July: grows in waste-ground, in Devonshire and Cornwall. *Engl. Bot.* vol. iv. pl. 248: *Lepidium didymum. Engl. Fl.* vol. iii. p. 180.

13. CRA'MBE.

Calyx of four oblong, concave, spreading leaves. Petals large, obtuse, broad, spreading. Filaments awl-shaped, the four longest with a sharp lateral tooth. Anthers oblong. Germen oblong. Style none. Stigma obtuse. Pouch finally leathery, of two joints, each one-celled, not bursting, the lower abortive, the upper globular and deciduous. Seed solitary, globular.

C. maritima. Sea Kale. Leaves roundish, sinuated, toothed, glaucous, smooth.——Root large and fleshy: stems two feet high, branched, spreading, smooth and glaucous: leaves stalked, leathery: flowers large, white, in terminal clusters. The young leaves are boiled as cabbage. Perennial: flowers in May and June: grows in sand on the sea-coast. *Engl. Bot.* vol. xiii. pl. 924. *Engl. Fl.* vol. iii. p. 184.

14. CAKI'LE.

Calyx of four, erect, oblong, deciduous leaves, two opposite ones protuberant at the base. Petals inversely egg-shaped, obtuse, spreading, their claws as long as the calyx. Filaments awl-shaped, simple. Anthers oblong, cleft at the base. Germen oblong. Style none. Stigma obtuse. Pouch of two joints, angular, compressed, the lower often abortive, the upper oblong, with a tapering point, deciduous, each one-celled, not bursting. Seeds one in each cell, elliptical.

C. maritima. Sea Rocket. Joints of the pouch two-edged, the upper one arrow-shaped; leaves fleshy, pinnatifid, obtuse.——The whole plant smooth and glaucous: stem a foot high, much branched: leaves scattered: flowers large, densely corymbose: petals lilac. Annual: flowers from June to September: grows on the sea-shore, in sand; common. *Engl. Bot.* vol. iv. pl. 231: *Bunias Cakile. Engl. Fl.* vol. iii. p. 183.

SILIQUOSA.

15. DENTA'RIA.

Calyx of four oblong, erect leaves. Petals inversely egg-shaped, obtuse, horizontal, with erect claws, shorter than the calyx. Filaments awl-shaped, as long as the calyx. Anthers arrow-shaped, erect. Germen oblong. Style short and thick. Stigma obtuse. Pod sessile, lance-shaped, compressed, tapering upwards; valves flat, without ribs, narrower than the partitions. Seeds egg-shaped, not bordered, inserted alternately in a single row, by dilated and winged stalks.

D. bulbifera. Bulbiferous Coralwort. Lower leaves pinnatifid, upper simple, with axillar bulbs.——Stem erect, leafy, two feet high:

leaves alternate, bright green: flowers purple, corymbose. Perennial: flowers in April and May: grows in moist shady places in England; rare. *Engl. Bot.* vol. v. pl. 309. *Engl. Fl.* vol. iii. p. 186.

16. CARDAMI'NE.

Calyx of four oblong, blunt, slightly spreading leaves, two of them protuberant at the base. Petals inversely egg-shaped, undivided, tapering into short claws. Filaments awl-shaped, the two shorter with a gland at the base. Anthers small heart-shaped, acute, recurved. Germen linear, slender. Style very short. Stigma obtuse. Pod erect, linear, compressed; valves flat, without ribs, scarcely narrower than the bordered partition. Seeds egg-shaped, not bordered, inserted alternately in a single row, by short and slender stalks.

* *Leaves simple.*

C. bellidofólia. Daisy-leaved Cardamine. Leaves simple, egg-shaped, entire; the root-leaves much shorter than their stalks; style short, conical.——Two or three inches high: flowers few, corymbose: calyx purplish: petals white. Perennial: flowers in August: grows in alpine pastures. According to Withering, specimens found in Scotland by Mr. Milne. *Engl. Bot.* vol. xxxiii. pl. 2355. *Engl. Fl.* vol. iii. p. 187.

** *Leaves pinnate.*

C. impátiens. Narrow-leaved Cardamine. Leaves pinnate, with lance-shaped leaflets; stipules fringed.——About a foot high: flowers minute, white. Annual: flowers in May and June: grows in mountainous meadows, by the sides of streams. *Engl. Bot.* vol. ii. pl. 80. *Engl. Fl.* vol. iii. p. 187.

C. hirsúta. Hairy Cardamine. Leaves pinnate, without stipules, leaflets stalked, roundish.——From three inches to a foot high, more or less hairy: flowers small, white, corymbose. Annual: flowers from March to July: grows in loose soil, in shady places. *Engl. Bot.* vol. vii. pl. 492. *Engl. Fl.* vol. iii. p. 492.

C. praténsis. Ladies' Smock. Cuckoo-flower. Leaves pinnate, without stipules; leaflets of the radical ones roundish, toothed; those of the stem-leaves lance-shaped, entire; petals with a tooth on the claw.——About a foot high: flowers large, in corymbs, pale purple, lilac or white. Perennial: grows in moist meadows and watery places: flowers in May. *Engl. Bot.* vol. xi. pl. 776. *Engl. Fl.* vol. iii. p. 189.

C. amára. Bitter Cardamine. Leaves pinnate, without stipules; leaflets of the lower more roundish, of the rest angular or toothed; stem creeping at the base.——Stems from one to two feet high: flowers large, white. Perennial: flowers in April and May: grows in wet meadows; rare. *Engl. Bot.* vol. xi. pl. 776. *Engl. Fl.* vol. iii. p. 189.

17. A'RABIS.

Calyx of four oblong, converging, erect, deciduous leaves, two opposite ones somewhat larger, and protuberant at the base. Petals oblong

undivided, spreading, tapering into broadish claws, hardly so long as the calyx. Filaments thread-shaped, erect, generally with four glands at their base externally. Anthers heart-shaped. Germen linear. Style very short. Stigma obtuse. Pod linear, compressed; its valves nearly flat, ribbed or veined, slightly undulated by the seeds; partition linear, membranous. Seeds in one row, oval or round, compressed.

A. Thaliána. Common Wall-cress. Leaves hairy, toothed; root-leaves stalked, oblong, the rest sessile.——About a foot high, branched: flowers small, white, corymbose. Annual: flowers in April: grows on walls, and in dry sandy ground; common. *Engl. Bot.* vol. xiii. pl. 901. *Engl. Fl.* vol. iii. p. 209.

A. stricta. Bristol Rock-cress. Leaves toothed, obtuse, bristly; those of the root somewhat lyrate; stem hairy; calyx smooth.—— Stem from three to six feet high, round, leafy: flowers few, corymbose, erect, cream-coloured. Perennial: flowers in May: grows in rocky places, about Bristol. *Engl. Bot.* vol. ix. pl. 614. *Engl. Fl.* vol. iii. p. 210.

A. hispida. Alpine Rock-cress. Root-leaves lyrate, smooth or with scattered hairs; stem-leaves lance-shaped, entire, scattered; petals spreading.——Stem from three to ten inches high, ascending: root-leaves in tufts: flowers small, white. Perennial: flowers in July: grows in the fissures of rocks on high mountains in Wales and Scotland. *Engl. Bot.* vol. vii. pl. 409: *Cardimine hastulata. Engl. Fl.* vol. iii. p. 211.

A. hirsúta. Hairy Wall-cress. Leaves all bristly, toothed, those of the stem embracing; pods erect.——Stems about a foot high, erect, stiff, leafy, covered with spreading hairs: flowers small, white. Perennial: flowers in May: grows on dry rocks, gravelly banks and walls. *Engl. Bot.* vol. ix. pl. 587. *Engl. Fl.* vol. iii. p. 213.

A. Turríta. Tower-cress. Leaves toothed, embracing the stem; pods linear, flat, recurved in one direction; bracteas leafy.——About a foot high: leaves heart-shaped at the base, with short, bristly hairs, the uppermost becoming oblong bracteas: flowers pale yellow: pods thickened at the edges. *Engl. Bot.* vol. iii. pl. 178. *Engl. Fl.* vol. iii. p. 214.

18. TURRI'TIS.

Calyx of four oblong, converging, erect, deciduous leaves, two opposite ones slightly protuberant at the base. Petals inversely egg-shaped, undivided, erect. Filaments thread-shaped, erect. Anthers oblong. Germen linear, as long as the petals. Style very short. Stigma obtuse. Pod linear, compressed, very long, its valves straight, flat, with a prominent keel. Seeds very numerous, arranged in two rows in each cell, crowded, egg-shaped, compressed, slightly bordered.

T. glábra. Smooth Tower Mustard. Root-leaves toothed, rough, the rest entire, clasping the stem, smooth.——Stem from two to three feet high, erect, simple, smooth: root-leaves oblong, nearly lyrate: flowers numerous, corymbose, pale yellow. Annual: flowers in May

and June: grows on banks and by road-sides. *Engl. Bot.* vol. xi. pl. 777. *Engl. Fl.* vol. iii. p. 215.

19. NASTURTIUM.

Calyx of four oblong, obtuse, spreading, deciduous leaves. Petals inversely egg-shaped, undivided, spreading, with short claws. Filaments awl-shaped, the two shorter each with a gland at the base internally. Anthers somewhat heart-shaped. Germen cylindrical. Style erect, short, cylindrical. Stigma obtuse, notched. Pod nearly cylindrical, shortish; its valves concave, without ribs or keel. Seeds roundish, flattened, irregularly arranged, on slender stalks.

N. officinále. Common Water-cress. Leaves pinnate, with roundish heart-shaped, waved leaflets.——Stems spreading, generally floating, branched, angular, leafy, smooth: leaves deep green: flowers white. Perennial: flowers in June and July: grows in rivulets, clear ditches and ponds; common. *Engl. Bot.* vol. xii. pl. 855: *Sisymbrium Nasturtium. Engl. Fl.* vol. iii. p. 192.

N. sylvéstre. Creeping Yellow Cress. Leaves pinnate, with elliptical, deeply serrate leaflets; root creeping.——Stems erect, a foot high, angular, furrowed, roughish: flowers numerous, small, gold-yellow, in terminal clusters. Perennial: flowers from June to September: grows in wet meadows and watery places. *Engl. Bot.* vol. xxxiii. pl. 2324: *Sisymbrium sylvestre. Engl. Fl.* vol. iii. p. 193.

N. terréstre. Annual Yellow Cress. Leaves pinnatifid, unequally toothed; root tapering; petals not longer than the calyx.——Stem a foot high, branched: flowers very small, pale yellow. Annual: flowers from June to September: grows in watery places. *Engl. Bot.* vol. xxv. pl. 1747: *Sisymbrium terrestre. Engl. Fl.* vol. iii. p. 194.

N. amphíbium. Amphibious Yellow Cress. Leaves oblong, pinnatifid, or serrate; roots fibrous; petals longer than the calyx.——Stem two or three feet high, branched: flowers small, bright yellow. Perennial: flowers from June to September: grows in watery places. *Engl. Bot.* vol. xxvi. pl. 1840: *Sisymbrium amphibium. Engl. Fl.* vol. iii. p. 195.

20. SISYMBRIUM.

Calyx of four oblong, concave, spreading, deciduous leaves. Petals oblong, obtuse, undivided, with claws nearly the length of the calyx. Filaments thread-shaped, erect. Anthers heart-shaped. Germen linear, sessile, slender. Style very short. Stigma knobbed, notched. Pod linear, slightly angular; valves linear, concave, waved; partition narrow, membranous. Seeds numerous, small, oblong, arranged in a single row.

S. officinále. Common Hedge Mustard. Pods downy, pressed close to the stalk; leaves runcinate, hairy; stem rough with deflected bristles.——From one to two feet high, branched: leaves lyrate: flowers pale yellow, small, corymbose. Warm and acid to the taste. Infusion of it is said to be good for hoarseness, and ulcers of the throat. Annual: flowers in June and July: grows among rubbish, and by

roads and hedges; common. *Engl. Bot.* vol. xi. pl. 735: *Erysimum officinale. Engl. Fl.* vol. iii. p. 196.

S. l'rio. London Rocket. Leaves runcinate, toothed, smooth; stem smooth; pods erect.——About two feet high, smooth: flowers yellow, small. Annual: flowers in July and August: grows in waste ground and among rubbish, about London. *Engl. Bot.* vol. xxiii. pl. 1631. *Engl. Fl.* vol. iii. p. 197.

S. Sóphia. Flix-weed. Leaves doubly pinnatifid, a little hairy; petals smaller than the calyx.——Stem slender, about two feet high: flowers small, greenish-yellow. Annual: flowers from June to September: grows among rubbish, and in waste-ground. *Engl. Bot.* vol. xiv. pl. 963.

21. MATTHI'OLA.

Calyx of four linear, oblong, concave, erect, converging, deciduous leaves, two opposite ones protuberant at the base. Petals inversely egg-shaped, spreading, with erect claws, as long as the calyx. Filaments awl-shaped, the two outer much shorter, and embraced at the base by a gland. Anthers oblong, nearly erect, with two linear lobes. Germen oblong, somewhat compressed, shorter than the stamens. Style short and thick. Stigma two-lobed. Pod linear, compressed, convex or keeled; valves straight; partition membranous. Seeds round, compressed, having a membranous border, and arranged alternately in a single row.

M. incana. Hoary Shrubby Stock. Stem shrubby, erect; branched; leaves lance-shaped, obtuse, hoary with dense hairs.——About two feet high: flowers large, corymbose, with pale purple petals. Flowers in May and June: grows on rocks, near Hastings, Sussex. *Engl. Bot.* vol. xxvii. pl. 1935: *Cheiranthus incanus. Engl. Fl.* vol. iii. p. 205.

M. sinuáta. Great Sea Stock. Stem herbaceous, with spreading branches; leaves sinuate, obtuse, downy; those of the branches undivided; pods rough, with prominent glands.——The whole plant covered with dense starry hairs and short glandular prickles: stem two feet high: flowers purple. *Engl. Bot.* vol. vii. pl. 462: *Cheiranthus sinuátus. Engl. Fl.* vol. iii. p. 206.

22. BARBARE'A.

Calyx of four oblong, concave, erect, deciduous leaves. Petals inversely egg-shaped, undivided, their claws nearly as long as the calyx. Filaments awl-shaped, erect, with a gland on each side within the shorter ones. Germen oblong, four-sided. Style short, cylindrical. Stigma obtuse. Pod linear, four-sided, slightly compressed; valves concave, keeled, even: partition membranous, thick-edged. Seeds egg-shaped, flattish, arranged alternately in one row.

B. vulgáris. Bitter Winter-cress. Yellow Rocket. Lower leaves lyre-shaped, with the terminal lobe roundish; upper leaves inversely egg-shaped, toothed.——Stem about two feet high, stout, angular, furrowed: flowers small, bright yellow, in corymbose clusters. Bitter

and sharp to the taste, used sometimes as a salad. Perennial: flowers from May to August: grows on the banks of ditches and rivers, and about hedges and walls. *Engl. Bot.* vol. vii. pl. 443: *Erysimum Barbarea. Eng. Fl.* vol. iii. p. 198.

B. præcox. Early Winter-cress. Lower leaves lyrate, upper deeply pinnatifid, with linear, entire segments.——From one to two feet high: flowers yellow, very small. Biennial: flowers from April to October: grows in watery places. *Engl. Bot.* vol. xvi. pl. 1129: *Erysimum præcox. Eng. Fl.* vol. iii. p. 199.

23. ERY'SIMUM.

Calyx of four oblong, concave, erect, deciduous leaves. Petals inversely egg-shaped, obtuse, spreading, their claws erect and nearly as long as the calyx. Filaments thread-shaped, erect, with a gland on each side within the shorter ones. Anthers oblong. Germen oblong, four-sided. Style very short. Stigma small, knobbed, notched. Pod four-sided, slender; valves concave, keeled, right-angled; partition membranous. Seeds egg-shaped, arranged in one row.

E. cheiranthoides. Treacle-mustard. Leaves lance-shaped, obscurely toothed, covered with forked bristles; pods nearly erect, on the horizontal stalks; stigma nearly sessile.——Stem erect, branched, two feet high: flowers numerous, small, yellow. The seeds are used for destroying worms in children. Annual: flowers in July: grows in corn-fields. *Engl. Bot.* vol. xiv. pl. 942. *Eng. Fl.* vol. iii. p. 201.

E. Alliária. Garlick Hedge-Mustard. Jack-by-the-hedge. Sauce-alone. Leaves heart-shaped, broadly toothed, stalked.——Stem from one to three feet high: flowers numerous, white. Annual: flowers in May: grows among rubbish, and by hedges and walls; common. When bruised, it emits a smell like garlic; it is bitter and acrid, and has been used as salad. *Engl. Bot.* vol. xii. pl. 796. *Eng. Fl.* vol. iii. p. 201.

E. orientale. Hare's-ear. Treacle-mustard. Leaves elliptical, heart-shaped at the base, clasping the stem; root-leaves inversely egg-shaped, all smooth, glaucous, entire.——Stem from one to two feet high: flowers cream-coloured, in a loose corymbose cluster. Annual: flowers in June: grows in fields and on rocks near the sea, in the south-east of England. *Eng. Bot.* vol. xxvi. pl. 1804: *Brassica orientalis. Engl. Fl.* vol. iii. p. 202.

24. HES'PERIS.

Calyx of four oblong, obtuse, deciduous leaves, lying over each other at the upper part; two opposite ones protuberant at the base. Petals inversely egg-shaped, obtuse or slightly notched, obliquely spreading; claws linear, erect, channelled, as long as the calyx. Filaments thread-shaped, erect, simple, the two shorter with a gland at their base internally. Anthers linear. Germen four-sided, linear, as long as the calyx. Style very short. Stigma of two erect, obtuse, downy lobes. Pod linear, four-sided, striated, with protuberances raised by the seeds; partitions membranous. Seeds oblong, pendulous, in one row.

M. matronālis. Dame's-violet. Leaves between egg-shaped and lance-shaped, toothed; stem erect, slightly branched; pods nearly erect, smooth.——From one to two feet high: flowers pale purplish, sweet-scented, especially in the evening. Perennial: flowers in May and June: grows on banks and in bushy places; rare. *Engl. Bot.* vol. xi. pl. 731: *Hesperis inodora. Engl. Fl.* vol. iii. p. 207.

25. CHEIRA'NTHUS.

Calyx of four oblong, concave, erect, deciduous leaves, two opposite ones protuberant at the base. Petals inversely egg-shaped, spreading, with erect claws, as long as the calyx. Filaments awl-shaped, the two outer embraced at the base by a gland. Anthers arrow-shaped, acute, of two linear lobes. Germen linear, compressed, as long as the stamens. Style short. Stigma more or less two-lobed. Pod linear, compressed, two-edged; valves straight, partition membranous. Seeds egg-shaped, compressed, arranged alternately in one row.

Ch. fruticulōsus. Wild Wall-flower. Stem shrubby with angular branches; leaves lance-shaped, acute, hoary beneath.——Stem bushy, from one to two feet high: flowers large, with rich yellow petals. Perennial: flowers in May and June: grows on old buildings and high walls. *Engl. Bot.* vol. xxvii. pl. 1934. *Engl. Fl.* vol. iii. p. 203.

26. BRA'SSICA.

Calyx of four oblong, concave leaves, protuberant and close below, spreading above. Petals inversely egg-shaped, spreading, with erect, channelled claws. Filaments awl-shaped; erect; a gland at the inside of each of the outer, and one at the outside of each of the longer pairs. Anthers oblong. Germen cylindrical, as long as the stamens. Style tapering. Stigma knobbed. Pod nearly cylindrical, beaked, with the style two-celled, with a cell in the beak; valves concave; partitions membranous. Seeds nearly globular, arranged in a single row; the cell of the beak also sometimes containing one or more seeds.

B. Nāpus. Rape. Cole-seed. Root spindle-shaped; leaves smooth, upper ones lance-shaped, heart-shaped at the base and clasping; the lower ones lyre-shaped, toothed.——Stem erect, striated, branched, two feet high: leaves glaucous: flowers bright yellow. This species is cultivated for its seeds which afford a large quantity of expressed oil. The refuse is employed as manure. Biennial: flowers in May. *Engl. Bot.* vol. xxx. pl. 2146. *Engl. Fl.* vol. iii. p. 217.

B. Rāpa. Common Turnip. Root fleshy, globular, depressed; root-leaves lyrate, rough; stem-leaves nearly entire, smooth. Flowers pale yellow. Biennial: flowers in May: grows by the edges of fields. *Engl. Bot.* vol. xxxi. pl. 2176. *Engl. Fl.* vol. iii. p. 217.

B. campēstris. Common Wild Navew. Root tapering, slender; leaves glaucous, heart-shaped, taper-pointed, embracing the stem; the lower ones lyrate, toothed.——Stem erect, slender, two feet high: flowers large, pale yellow. Annual: flowers in June and July: grows

in corn-fields; common. *Engl. Bot.* vol. xxxii. pl. 2234. *Engl. Fl.* vol. iii. p. 218.

B. olerácea. Sea Kale, or *Cabbage.* Root stem-like, cylindrical, fleshy; leaves glaucous, waved, lobed, smooth.——From one to two feet high: flowers pale yellow, large. Biennial: flowers in May and June: grows on maritime cliffs. From this species are derived all our numerous varieties of Cabbage. *Engl. Bot.* vol. ix. pl. 637. *Engl. Fl.* vol. iii. p. 219.

B. monénsis. Isle of Man Cabbage. Leaves glaucous, nearly smooth, deeply pinnatifid, with oblong, unequally toothed lobes; pods four-cornered; beak lodging two or three seeds.——Root tapering, woody: stem simple, smooth, about a foot high: flowers pale yellow, veined with purple, large. Perennial: flowers in June and July: grows on the sandy sea-coast, in the Isle of Man, Anglesea, near Liverpool, in Bute and Arran, &c. *Eng. Bot.* vol. xiv. pl. 962: *Sisymbrium monense. Engl. Fl.* vol. iii. p. 220.

27. SINA'PIS.

Calyx of four oblong, straight, spreading, deciduous leaves. Petals inversely egg-shaped, rounded, entire, spreading; with linear, erect claws. Filaments awl-shaped, erect; a gland at the inside of each of the outer, and one at the outside of each of the longer pairs. Anthers oblong. Germen cylindrical. Style very short. Stigma knobbed. Pod nearly cylindrical, beaked; valves undulated; partition membranous, the beak also often contains a seed. Seeds nearly globular, arranged in one row.

S. arvénsis. Field Mustard. Pods with many angles, knotty, longer than their awl-shaped beak; leaves toothed, partly egg-shaped, partly lyre-shaped.——Root small, tapering, hard: stem from one to two feet, rough with reflected bristles, as are the leaves; flowers greenish yellow. Annual: flowers through the summer and autumn: grows in corn-fields, abundantly. *Eng. Bot.* vol. xxv. pl. 1784. *Eng. Fl.* vol. iii. p. 221.

S. álba. White Mustard. Pods bristly, knotty, shorter than their two-edged beak; leaves lyre-shaped.——Stem rough, about a foot and a half high: flowers large, yellow. Eaten when young as salad. Annual: flowers in July: grows in waste places and corn-fields. *Engl. Bot.* vol. xxiv. pl. 1677. *Engl. Fl.* vol. iii. p. 222.

S. nígra. Common Mustard. Pods closely pressed to the stalk, four-cornered, smooth, with a short beak; lower leaves lyre-shaped; upper narrow lance-shaped, entire, smooth, stem from three to four feet high: flowers yellow. Annual: flowers in June and July: grows in waste places and fields. The common mustard used at table is obtained from the seeds. It is also employed as a stimulant to the soles of the feet in fevers, and to various parts of the skin as a rubefacient. *Engl. Bot.* vol. xiv. pl. 969. *Engl. Fl.* vol. iii. p. 222.

S. tenuifólia. Narrow-leaved Wall Mustard. Pods erect, linear, compressed, slightly beaked, on spreading stalks; seeds in two rows; upper leaves lance-shaped, undivided, lower once or twice pinnatifid;

stem smooth.——Stem erect, much branched, two feet high: flowers large pale yellow. The whole plant is acrid, and has a disagreeable smell. Perennial: flowers from June to October: grows on heaps of rubbish and old walls, about towns. *Engl. Bot.* vol. viii. pl. 525. *Engl. Fl.* vol. iii. p. 223.

S. murālis. Sand Mustard. Pods ascending, linear, compressed, slightly beaked, on spreading stalks; seeds in two rows; leaves sinuate; stem covered with reflected bristles.——Stem about eight inches high: flowers greenish-yellow. Annual: flowers in August and September: grows in sandy ground, in the Isle of Thanet, and near Bristol. *Engl. Bot.* vol. xvi. pl. 1090. *Engl. Fl.* vol. iii. p. 224.

28. RA'PHANUS.

Calyx of four oblong, parallel, erect, deciduous leaves, two of them slightly prominent at the base. Petals inversely egg-shaped or heart-shaped, spreading, with linear erect claws. Filaments awl-shaped, erect; a gland within each of the shorter, and one at the outside of each pair of the longer. Anthers oblong. Germen cylindrical, tapering. Style awl-shaped. Stigma knobbed, small. Pod oblong, tapering upward, irregularly tumid, as if jointed, leathery; with two incomplete cells. Seeds globular, arranged in a single row.

R. maritimus. Sea-Radish. Pods one-celled, jointed, furrowed; root-leaves interruptedly lyre-shaped.——Root large, tapering, branched: stems spreading from one to two feet high: flowers large, pale yellow. Biennial: flowers in May and June: grows in sand near the sea. Sussex, Galloway, Ayrshire, Bute, abundant in the outer Hebrides. *Engl. Bot.* vol. xxiii. pl. 1643. *Engl. Fl.* vol. iii. p. 227.

R. Raphanistrum. Field Radish. Charlock. Pods one-celled, jointed, striated; leaves lyre-shaped.——The whole plant rough with bristles: stem from one to two feet high: flowers pale yellow. Annual: flowers in the summer months: grows in corn-fields, abundantly. *Engl. Bot.* vol. xii. pl. 856. *Engl. Fl.* vol. iii. p. 226.

Class XVI. MONADELPHIA.

Plants bearing Flowers the Filaments of whose Stamens are joined together in one set.

Order I. PENTANDRIA. *Five Stamens.*

1. ERO'DIUM. *Style* one. *Fruit* beaked, formed of five *capsules*, each tipped with a spiral *awn*, bearded on the inside.

(Linum. Geranium pusillum.)

Order II. DECANDRIA. *Ten Stamens.*

2. GERA'NIUM. *Style* one. *Calyx* of five leaves. *Corolla* of five

petals. *Fruit* beaked, of five aggregate *capsules*, each with a long naked *awn*.

Oxalis. Spartium. Genista. Anthyllis. Ulex. Ononis.

Order III. POLYANDRIA. *Numerous Stamens.*

5. LAVATE'RA. *Styles* numerous. *Calyx* double, the outer three-lobed. *Capsules* numerous, circularly arranged, one-seeded.
4. MA'LVA. *Styles* numerous. *Calyx* double, the outer of three leaves. *Capsules* numerous, circularly arranged, one-seeded.
3. ALTHÆ'A. *Styles* numerous. *Calyx* double, the outer of nine leaves. *Capsules* numerous, circularly arranged, one-seeded.

MONADELPHIA—PENTANDRIA.

1. ERO'DIUM.

Calyx inferior, of five egg-shaped, acute, permanent leaves. Petals five, inversely egg-shaped, spreading, rather longer than the calyx. Nectaries, five glands, alternate with the petals. Filaments ten, awl-shaped, united at the base; five of them bearing anthers, five alternate ones shorter and abortive. Anthers oblong. Germen roundish, with five furrows. Style awl-shaped, erect, longer than the stamens, permanent. Stigmas oblong, reflected. Capsules five, inversely egg-shaped, aggregate, each tipped with a long, linear, erect, pointed, stiff awn, hairy at the inside, and finally spirally twisted, adhering by its point to the top of the style. Seeds one in each capsule, oblong.

E. cicutárium. Hemlock Stork's-bill. Flowers in stalked umbels; leaves pinnate, with sessile pinnatifid leaflets; stems procumbent, hairy. ——The whole plant is hairy and somewhat clammy, with a disagreeable smell: petals rose-coloured, frequently white. Annual: flowers from June to September: grows in sandy places, especially near the sea. *Engl. Bot.* vol. xxv. pl. 1768. *Engl. Fl.* vol. iii. p. 229.

E. moschátum. Musky Stork's-bill. Flowers in stalked umbels; leaves pinnate, with nearly sessile, elliptical, unequally cut leaflets; stems procumbent, hairy; perfect stamens toothed at the base.—— More hairy and clammy than the preceding, and exhaling a musky smell: petals rose-coloured. Annual: flowers in June and July: grows in hilly pastures, in England. *Engl. Bot.* vol. xiii. pl. 902. *Engl. Fl.* vol. iii. p. 230.

E. maritimum. Sea Stork's-bill. Stalks few-flowered; leaves simple, heart-shaped, cut, crenate, rough; stems depressed, hairy.——Petals minute, pale red. Perennial: flowers from May to September: grows on the sandy coasts of the south of England. *Engl. Bot.* vol. ix. pl. 646. *Engl. Fl.* vol. iii. p. 221.

DECANDRIA.

2. GERA'NIUM.

Calyx inferior, of five egg-shaped, acute, permanent leaves. Petals five, inversely heart-shaped, spreading, much larger than the calyx. Nectaries, five glands, alternate with the petals. Filaments ten, awl-shaped, united at the base. Anthers oblong. Germen roundish, with five furrows. Style awl-shaped, erect, longer than the stamens, permanent. Stigmas five, oblong, reflected. Capsules five, nearly globular, aggregate, each tipped with a long, linear, erect, pointed, stiff awn, smooth and naked, finally recurved, adhering by its point to the top of the style. Seeds one in each capsule, roundish.

* *Stalks one-flowered.*

G. sanguíneum. Bloody Crane's-bill. Leaves roundish, with five or seven deep, three-cleft lobes.——Stems from one to two feet high, round, branched, leafy, with spreading hairs: flowers rich crimson. Perennial: flowers from July to September: grows in pastures and bushy places. *Engl. Bot.* vol. iv. pl. 272. *Engl. Fl.* vol. iii. p. 242.

** *Stalks two-flowered; roots perennial.*

G. phæ'um. Dusky Crane's-bill. Leaves palmate, with serrate lobes; calyx slightly awned; capsules keeled, hairy below, wrinkled at the top; stamens hairy.——Stem two feet high, erect, panicled, hairy: petals dark brownish-red. Perennial: flowers in May and June: grows in woods and thickets; rare. *Engl. Bot.* vol. v. pl. 322. *Engl. Fl.* vol. iii. p. 232.

G. nodósum. Knotty Crane's-bill. Leaves opposite, five or three-lobed, pointed, serrate; capsules even, downy all over.——Stems about eighteen inches high, erect, swelled above and below the joints: flowers rather large, with purple petals. Perennial: flowers from May to August: grows in the mountainous parts of Cumberland. *Engl. Bot.* vol. xvi. pl. 1091. *Engl. Fl.* vol. iii. p. 233.

G. sylváticum. Wood Crane's-bill. Leaves with five or seven cut and serrate lobes; stem erect, corymbose; capsules hairy all over; stamens awl-shaped, fringed.——Stems two or three feet high, erect, much branched, rough with deflected hairs: petals entire or slightly notched, light purple with darker veins. Perennial: flowers in June and July: grows in woods, thickets, and pastures. *Engl. Bot.* vol. ii. pl. 121. *Engl. Fl.* vol. iii. p. 234.

G. praténse. Blue Meadow Crane's-bill. Leaves with five or seven, sharply pinnatifid and serrate lobes; capsules hairy all over; stamens smooth, much dilated at the base.——Stems about two feet high, much branched, rough: flowers large, with pale blue flowers. Perennial: flowers in June and July: grows in pastures and thickets, and by the sides of rivers. *Engl. Bot.* vol. vi. pl. 404. *Engl. Fl.* vol. iii. p. 235.

G. pyrenaícum. Mountain Crane's-bill. Leaves kidney-shaped, with five or seven oblong, obtuse, notched lobes; capsules keeled, even, somewhat downy; petals deeply notched.——Stems about two feet

high, erect, branched, covered with fine spreading hairs: flowers rather small, fine purple. Perennial: flowers in June and July: grows in meadows and pastures. *Engl. Bot.* vol. vi. pl. 405. *Engl. Fl.* vol. iii. p. 939.

*** *Stalks two-flowered; roots annual.*

G. Robertiánum. Stinking Crane's-bill. Herb Robert. Leaves ternate or quinate, with pinnatifid leaflets: calyx angular; hairy; capsules wrinkled, keeled.——Stems about a foot long, spreading, branched, red, and brittle: flowers purple, sometimes white. Annual: flowers from May to October: grows in waste ground, under hedges, and especially among large stones and the debris of rocks. *Engl. Bot.* vol. xxi. pl. 1486. *Engl. Fl.* vol. iii. p. 235.

G. lúcidum. Shining Crane's-bill. Leaves roundish, five-lobed; calyx pyramidal, transversely wrinkled; capsules wrinkled, keeled. ——Stems nearly a foot high, smooth, succulent, generally bright red: flowers small, bright rose-coloured. Annual: flowers from May to August: grows on walls and among the debris of rocks. *Engl. Bot.* vol. ii. pl. 76. *Eng. Fl.* vol. iii. p. 236.

G. mólle. Dove's-foot Crane's-bill. Leaves rounded, downy, with seven three-cleft lobes: capsules wrinkled, without hairs.——Soft and downy: stems spreading or decumbent, reddish, hairy, from four to ten inches long: flowers rather small, with purplish red, cleft petals. Annual: flowers from April to September: grows in corn-fields, pastures, and by waysides; common. *Engl. Bot.* vol. xi. pl. 778. *Engl. Fl.* vol. iii. p. 237.

G. pusíllum. Small-flowered Crane's-bill. Leaves kidney-shaped, palmate, cut, downy; capsules keeled, even, covered with erect hairs; anthers only five.——Stem weak, decumbent: flowers very small, with purplish cleft petals. Annual: flowers from June to September: grows in corn-fields and waste ground; common. *Engl. Bot.* vol. vi. pl. 385. *Engl. Fl.* vol. iii. p. 238.

G. rotúndifolium. Soft Round-leaved Crane's-bill. Leaves kidney-shaped, lobed, cut, downy; capsules even, hairy; petals entire.—— Annual: flowers in June and July: grows in waste ground. *Engl. Bot.* vol. iii. pl. 157. *Engl. Fl.* vol. iii. p. 240.

G. dissectum. Leaves deeply divided into five or seven narrow, three-cleft segments; petals cleft; capsules hairy.——Stems weak, a foot or more high, branched, covered with short, deflected hairs: flowers rather small, with purplish-red petals. Annual: flowers in June and July: grows in fields, pastures, and waste ground. *Engl. Bot.* vol. xi. pl. 753. *Engl. Fl.* vol. iii. p. 241.

S. columbínum. Long-stalked Crane's-bill. Flower-stalks thrice as long as the leaves, which are deeply divided into five acutely cut lobes; petals entire, as long as the calyx; capsules even and smooth.—— Stems slender, procumbent, covered with stiff hairs: flowers bluish-purple. Annual: flowers in June and July: grows in dry pastures and fields. *Engl. Bot.* vol. iv. pl. 259. *Engl. Fl.* vol. iii. p. 241.

POLYANDRIA.

3. ALTHÆ'A.

Calyx inferior, double, permanent; the outer smaller, of one leaf, deeply divided into nine segments; the inner of one leaf, divided into five segments. Petals five, inversely heart-shaped, flat, with broad claws, attached to the bottom of the tube formed by the stamens. Filaments numerous, hair-like, united below into a tube. Anthers nearly kidney-shaped. Germen round, depressed. Style cylindrical, as long as the tube of the filaments. Stigmas about twenty, bristle-shaped, nearly as long as the style. Capsules about twenty, compressed, arranged in a circle round the columnar receptacle, each two-valved and one-celled. Seeds solitary, kidney-shaped, compressed.

A. officinālis. Marsh-Mallow. Leaves simple, very soft and downy, slightly five-lobed.——Stems erect, three feet high, simple, round, downy: flowers in axillar panicles: petals pale rose-colour. The whole plant, especially the root, yields, by decoction, a mild mucilage, used medicinally. Perennial: flowers from July to September: grows in salt marshes. *Engl. Bot.* vol. iii. pl. 147. *Engl. Fl.* vol. iii. p. 244.

4. MAL'VA.

Calyx inferior, double, permanent; the outer smaller, of three egg-shaped, acute leaves; the inner of one leaf, divided half-way into five broad segments. Petals five, inversely heart-shaped, abrupt, flat, their claws attached to the tube formed by the stamens. Filaments numerous, hair-like, united below into a tube. Anthers kidney-shaped. Germen round, depressed. Style cylindrical. Stigmas numerous, bristle-shaped, nearly as long as the style. Capsules numerous, compressed, arranged in a circle round the columnar receptacle, each two-valved and one-celled. Seeds solitary, kidney-shaped.

M. sylvéstris. Common Mallow. Stem erect: leaves with five or seven somewhat acute lobes; leaf-stalks and flower-stalks hairy.—— Stem much branched, from two to three feet high: leaves folded, soft and downy: flowers numerous: petals purplish-red, deeply notched. Perennial: flowers from June to September: grows about hedges and road-sides; common. *Engl. Bot.* vol. x. pl. 671. *Engl. Fl.* vol. iii. p. 245.

M. moschāta. Musk Mallow. Stem erect; root-leaves kidney-shaped, cut; those of the stem deeply divided into five or seven pinnatifid, jagged segments; calyx hairy, its outer leaves narrow, lance-shaped.——Stems about two feet high, little branched, rough: flowers on long axillar simple stalks: petals large, rose-coloured. Perennial: flowers in July and August: grows in pastures and by waysides. *Engl. Bot.* vol. xi. pl. 754. *Engl. Fl.* vol. iii. p. 247.

M. rotundifōlia. Dwarf Mallow. Stem prostrate; leaves roundish-heart-shaped, obtusely five-lobed; fruit-stalks bent downwards.——

Stems numerous, lying flat on the ground: flowers pale lilac. A variety with whitish flowers, whose petals are not longer than the calyx. Perennial: flowers from June to September: grows in waste ground and by waysides. *Engl. Bot.* vol. xvi. pl. 1092. and vol. iv. pl. 241. *Engl. Fl.* vol. iii. p. 246.

5. LAVATE'RA.

Calyx superior, double, permanent: the outer larger, of one leaf, deeply divided into three broad, spreading segments; the inner of one leaf, divided half-way into five acute lobes. Petals five, inversely heart-shaped, abrupt, flat, attached by their narrow claws to the tube formed by the stamens. Filaments numerous, hair-like, united below into a cylindrical tube. Anthers kidney-shaped. Germen round, depressed. Style cylindrical, with a conical permanent base. Stigmas from seven to fourteen, bristle-shaped, as long as the style. Capsules from seven to fourteen, arranged in a circle round the columnar receptacle, each two-valved and one-celled. Seeds solitary, kidney-shaped.

L. arbórea. Sea Tree-Mallow. Stem woody: leaves downy, plaited, with seven angles; flowers on simple aggregated axillar stalks.—Stem from six to ten feet high, erect: flowers large: petals purplish rose-colour, darker on the base. Biennial: flowers from July to October: grows on rocks along the sea-shore; rare. *Engl. Bot.* vol. xxvi. pl. 1841. *Engl. Fl.* vol. iii. p. 248.

Class XVII. DIADELPHIA.

Filaments united, forming two sets.

Order I. HEXANDRIA. *Six Stamens.*

1. FUMA'RIA. *Calyx* of two leaves. *Petals* four, irregular. Each filament bearing three anthers.

Order II. OCTANDRIA. *Eight Stamens.*

2. POLY'GALA. *Calyx* of five leaves, the two inner much larger, coloured. *Capsule* two-celled, two-valved.

Order III. DECANDRIA. *Ten Stamens.*

* *Stamens all united at the base, forming a tube which is generally split along its upper side.*

3. GENISTA. *Calyx* two-lipped, the upper lip with two teeth, the lower with three. *Standard* reflected.
4. U'LEX. *Calyx* of two leaves, nearly as long as the legume.
6. ANTHY'LLIS. *Calyx* inflated, five-toothed, inclosing the legume.
5. *ONO'NIS. Calyx* with five deep segments. *Standard* striated. *Legume* turgid, sessile.

** *Stamens, nine united at the base, one free; stigma or style downy.*

8. O'ROBUS. *Style* linear, nearly cylindrical. *Stigma* downy, linear, extending along the upper side of the style.
7. PI'SUM. *Style* triangular. *Stigma* downy, extending along the prominent upper angle of the style.
9. LÁTHYRUS. *Style* flattened, dilated upwards. *Stigma* downy, extending along the dilated part of the style.
10. VI'CIA. *Style* bearded in front, below the stigma.
11. E'RVUM. *Stigma* knobbed, downy all over.

*** *Stamens, nine united, one free; stigma not downy; legume two-celled.*

15. ASTRA'GALUS. *Legume* tumid, with two longitudinal cells.

**** *Stamens, nine united, one free; stigma not downy; legume one-celled, jointed.*

14. HEDY'SARUM. *Legume* of one or more compressed single-seeded joints. *Keel* very obtuse.
12. ORNITHOPUS. *Legume* somewhat cylindrical, curved, of many close, single-seeded joints.
13. HIPPOCRÉPIS. *Legume* compressed, partly membranous, incurved, with many curved joints; one of the sutures with several notches.

***** *Stamens, nine united, one free; stigma not downy; legume one-celled, not jointed.*

18. MEDICA'GO. *Legume* compressed, somewhat membranous, spirally twisted.
16. TRIFO'LIUM. *Legume* hardly longer than the calyx, with one seed, seldom more, deciduous, not bursting.
17. LOTUS. *Legume* cylindrical, straight, spongy within. *Wings* cohering at their upper edges. *Filaments* dilated upwards.

DIADELPHIA.—HEXANDRIA.

1. FUMA'RIA.

Calyx inferior, of two opposite, erect, acute, small, membranous, deciduous leaves. Corolla oblong, tubular, gaping, with a prominent palate filling up the mouth: petals four, more or less united; upper lip flat, blunt, notched, reflected, its base prominent, obtuse, forming the nectary; lower lip like the upper, sometimes with a similar nectary at the base, and sometimes only keeled there; two inner petals linear, slightly connected by their tips. Filaments two, flat, shorter than the corolla, one within each lip. Anthers roundish, three at the end of each filament. Germen roundish or oblong, compressed, pointed. Stigma compressed, of two flat lobes. Pod roundish or oblong, one-celled. Seeds roundish, crested.

* *Pod round, one-seeded; nectary single.*

F. officinàlis. Common Fumitory. Cluster rather loose; stem branched, spreading; leaves twice pinnate, with their segments lance-

shaped.——Stem from three to six inches high; clusters opposite to the leaves, stalked: flowers rose-coloured, dark red at their summit: spur very short, rounded. Annual: flowers from May to November: grows in loose soil; common. *Engl. Bot.* vol. ix. pl. 589. *Engl. Fl.* vol. iii. p. 255.

F. parviflóra. Small-flowered Fumitory. Cluster loose; stem spreading: leaves twice pinnate, with their segments linear and channelled.——Smaller than the last: flowers pale red, with purple tips. Annual: flowers in August and September: grows in fields in the south of England. *Engl. Bot.* vol. ix. pl. 590. *Engl. Fl.* vol. iii. p. 256.

F. capreolâta. Ramping Fumitory. Cluster rather loose; stem climbing by means of the twisted leaf-stalks; leaves thrice ternate, with wedge-shaped lobed leaflets.——From two to four feet high, greatly resembling the common fumitory. Annual: flowers in summer and autumn: grows in cultivated fields. *Engl. Bot.* vol. xiv. pl. 943. *Engl. Fl.* vol. iii. p. 256.

** *Pod oblong, many-seeded; nectary single.*

F. sólida. Solid Bulbous Fumitory. Stem generally simple, erect; leaves twice ternate; bracteas palmate, longer than each flower-stalk. ——Root round, fleshy: cluster terminal, solitary, erect, of about twelve pale purple flowers. Perennial: flowers in April and May: grows in woods and thickets in Westmoreland. *Engl. Bot.* vol. xxi. pl. 1471. *Engl. Fl.* vol. iii. p. 253.

F. lútea. Yellow Fumitory. Pods nearly cylindrical, shorter than their stalks; stem erect, angular; bracteas minute; spur short, rounded.——Stem about a foot high, erect, three-cornered: leaves thrice ternate, with wedge-shaped leaflets: flowers pale yellow, with deeper-coloured lips. Perennial: flowers in May: grows on old walls, in Derbyshire and Yorkshire. *Engl. Bot.* vol. ix. pl. 588. *Engl. Fl.* vol. iii. p. 253.

F. claviculâta. Pods lance-shaped, undulated; stem climbing; leaf-stalks ending in branched tendrils.——Stem slender, from two to three feet high: clusters opposite to each leaf: flowers yellowish-white. Annual: flowers in June and July: grows in bushy places. *Engl. Bot.* vol. ii. pl. 103. *Engl. Fl.* vol. iii. p. 254.

OCTANDRIA.

2. POLY'GALA.

Calyx inferior, of five leaves; the three outer smaller, egg-shaped. Petals varying in number, united to the filaments by their claws; limb of the upper deeply divided; the lower keel-shaped, generally crowned with a crested appendage. Filaments united at the bottom, divided above into two sets. Anthers eight, one-celled, tubular. Germen roundish. Style club-shaped, straight. Stigma two-lipped. Capsule round or inversely heart-shaped, compressed, two-valved, two-celled. Seeds one in each cell, oval, downy, crested.

P. vulgáris. Common Milkwort. Flowers in a terminal cluster; two inner leaves of the calyx about equal to the corolla; stems herbaceous, simple, ascending; leaves narrow, lance-shaped.——From three to six inches long: flowers blue, sometimes pink or white. Perennial: flowers in June and July: grows in dry pastures; common. *Engl. Bot.* vol. ii. pl. 76. *Engl. Fl.* vol. iii. p. 258.

DECANDRIA.

3. GENISTA.

Calyx inferior, two-lipped; the upper lip with two, the lower with three teeth. Corolla of five petals: standard inversely heart-shaped, reflected, standing out from the rest; wings oblong, spreading; keel of two lance-shaped obtuse petals, cohering below. Filaments ten, united below into a tube. Anthers roundish. Stigma oblong. Legume compressed, oblong, one-celled, with two concave valves. Seeds several, roundish.

* *Branches thornless.*

G. scoparia. Common Broom. Leaves ternate or solitary; branches angular; legumes much compressed, hairy at the margin.——A bushy shrub, with long, straight branches, having prominent, narrow angles: flowers axillar, solitary or in pairs, of a rich golden yellow, sometimes tinged with red. Decoction of the young twigs is diuretic, and has been used in dropsies. Flowers in May and June: grows in thickets and dry pastures. *Engl. Bot.* vol. xix. pl. 1339. *Engl. Fl.* vol. iii. p. 261: *Spartium scoparium.*

G. tinctória. Dyer's Green-weed. Wood-waxen. Leaves lance-shaped, smooth; branches round, striated, erect; legumes smooth, nearly cylindrical.——A small shrub, with numerous straight branches: flowers on short and axillar stalks, crowded about the tops of the branches: petals bright yellow. A good yellow colour is obtained from the whole plant. Flowers in July and August: grows in thickets and pastures. *Engl. Bot.* vol. i. pl. 44. *Engl. Fl.* vol. iii. p. 263.

G. pilósa. Hairy Green-weed. Leaves lance-shaped, broader toward the end, hairy beneath; stem tuberculated, prostrate; calyx and flower-stalks covered with silky hairs.——A small shrub with much branched stems, lying flat: flowers axillar and solitary, crowded about the top of the branches: petals bright yellow: legume oblong, hairy. Flowers in May, and again in September: grows on dry elevated heaths and pastures, in the south of England and Wales. *Engl. Bot.* vol. iii. pl. 208. *Engl. Fl.* vol. iii. p. 263.

* *Branches thorny.*

G. ánglica. Needle Green-weed. Petty Whin. Leaves egg-shaped, smooth; thorns simple, none on the flowering branches.——A small shrub, with ascending stems, about a foot long: flowers solitary, small, pale yellow, the standard deeper. Flowers in May and June: grows on heathy grounds. *Engl. Bot.* vol. ii. pl. 132. *Engl. Fl.* vol. iii. p. 264.

4. U'LEX.

Calyx inferior, of two egg-shaped, concave, equal, coloured, permanent leaves; the upper with two small teeth, the lower with three. Corolla of five petals; standard egg-shaped, cleft, ascending; wings oblong, obtuse; keel of two straight, obtuse petals, cohering at their lower edges. Filaments ten, all united at the base, one of them separate for more than half its length. Anthers roundish, two-lobed. Germen oblong, nearly cylindrical, hairy. Style awl-shaped, curved upwards. Stigma small, obtuse. Legume oblong, turgid, straight, little longer than the calyx, one-celled, two-valved; the valves concave, hard and elastic. Seeds polished, roundish.

U. europæ'us. Common Furze, Whin, or *Gorse.* Teeth of the calyx minute, close together; bracteas egg-shaped, loose; branches erect. ——A very bushy shrub, from two to five feet high, beset with thorns: leaves small, awl-shaped, thorn-tipped: flowers solitary or in pairs; bright yellow: two minute egg-shaped spreading bracteas at the base of the calyx. Flowers in May, occasionally at all seasons: grows in dry pastures and heaths. *Engl. Bot.* vol. xi. pl. 742. *Engl. Fl.* vol. iii. p. 265.

U. nánus. Dwarf Furze. Teeth of the calyx spreading; bracteas minute, close-pressed; branches reclining.——Half the size of the last in all its parts, and apparently nothing but a slight variety of it. Flowers in autumn: grows on dry elevated heaths and pastures. *Engl. Bot.* vol. xi. pl. 743. *Engl. Fl.* vol. iii. p. 226.

5. ONO'NIS.

Calyx inferior, tubular, rather deeply divided into five linear, pointed segments, the lower longest, and lying under the keel. Corolla of five petals; standard largest, heart-shaped, striated, keeled and compressed at the back, the sides depressed; wings inversely egg-shaped, half the length of the standard; keel of two converging petals, pointed, a little longer than the wings. Filaments ten, united into a cylinder, which is split above. Anthers roundish. Germen oblong. Style cylindrical, ascending. Stigma small, obtuse. Legume diamond-shaped, turgid, sessile, scarcely longer than the calyx, one-celled, two-valved, the valves stiff and elastic.

O. arvénsis. Rest-harrow. Cammock. Stem hairy; branches becoming at length thorny at the point; flowers mostly solitary; leaves ternate below, the rest simple, serrate, entire at the base.——Root woody, branched: flowers axillar, generally solitary, large, rose-coloured. Perennial: flowers from June to September: grows in dry pastures and the edges of fields. *Engl. Bot.* vol. x. pl. 682. *Engl. Fl.* vol. iii. p. 267.

6. ANTHY'LLUS.

Calyx inferior, egg-shaped, inflated, woolly, with five small, unequal, marginal teeth, permanent. Corolla of five petals, with linear claws, as long as the calyx; standard longest, reflected at the sides;

wings half egg-shaped, shorter; keel of two narrower petals, compressed, slightly cohering at the tips. Filaments ten, united into a cylinder, finally splitting along the upper edge, their extremities curved upwards. Anthers small, roundish. Germen oblong or half egg-shaped. Style awl-shaped, ascending. Stigma obtuse. Legume small, roundish or oblong, inclosed in the enlarged calyx, one-celled, two-valved. Seeds one or two, roundish.

A. Vulnerária. Kidney-vetch. Ladies'-fingers. Herbaceous; leaves pinnate, with a terminal leaflet; heads of flowers in pairs.——Stems about a foot high, ascending, round, hairy: leaves hairy beneath: flowers numerous: calyx pale, hairy: corolla yellow, sometimes red. Perennial: flowers from June to September: grows in dry pastures, abundant in those near the sea. *Engl. Bot.* vol. ii. pl. 104. *Engl. Fl.* vol. iii. p. 269.

7. PI'SUM.

Calyx inferior, cup-shaped, unequal, with five acute permanent segments, the two upper wider and more distant. Corolla of five petals; standard broadest, inversely heart-shaped, reflected, with two protuberances at the inner side near the bottom: wings inversely egg-shaped, coming together above, shorter; keel compressed, half-moon shaped, shorter than the wings. Filaments ten, nine united, the uppermost separated, flattish. Anthers small, roundish. Germen oblong, compressed. Style triangular, membranous at the edges, ascending. Stigma longitudinal, downy, united to the upper angle of the keel. Legume large, oblong, somewhat compressed, pointed, one-celled, one-valved. Seeds globular.

P. marítimum. Sea-pea. Leaf-stalks flattish above; stem angular; stipules arrow-shaped; stalks many-flowered.——Stems procumbent, four-cornered: leaves alternate, sessile, alternately pinnate with a branched tendril: flowers purple, veined with crimson. Perennial: flowers in July: grows on stony beaches in several parts of the eastern and southern shores of England. *Engl. Bot.* vol. xv. pl. 1046. *Engl. Fl.* vol. iii. p. 270.

8. O'ROBUS.

Calyx superior, cup-shaped, unequal, with five acute segments, the two upper shorter and more distant, the lower one longest. Corolla of five petals: standard inversely heart-shaped, reflected at the sides, rather longer than the rest; wings inversely egg-shaped, ascending, approaching each other; keel rounded, pointed, of two united petals, with separate claws. Filaments ten, nine united into a compressed tube, the other hair-like. Anthers small, roundish. Germen oblong, compressed. Style thread-shaped, straight, ascending, channelled above. Stigma longitudinal, linear, downy, extending along the upper side of the upper half of the style. Legume oblong or linear, somewhat cylindrical, pointed, ascending at the end, one-celled, two-valved. Seeds several, roundish.

O. tuberósus. Heath-pea. Common Bitter-vetch. Leaves pinnate with elliptical leaflets; stipules half arrow-shaped, toothed at the base; stem erect, simple.——Root knobbed, creeping: stems about a foot high: flowers in long-stalked, axillar clusters, variegated with blue, purple, and crimson. The root, which is sweetish and astringent, is chewed by the Highlanders. Perennial: flowers in June and July: grows in heaths, and in woods and open pastures; common. *Engl. Bot.* vol. xvii. pl. 1153. *Engl. Fl.* vol. iii. p. 272.

O. sylváticus. Wood Bitter-vetch. Stems spreading, hairy, branched; leaves pinnate, with numerous lance-shaped leaflets.——Root creeping, woody: stems numerous, from one to two feet long: petals cream-coloured, streaked and tipped with purple. Perennial: flowers in May and June: grows in mountainous woods and thickets. *Engl. Bot.* vol. viii. pl. 518. *Engl. Fl.* vol. iii p. 273.

9. LA'THYRUS.

Calyx superior, cup-shaped, unequal, with five lance-shaped segments, the two upper shorter, the lower one longest. Corolla of five petals; standard largest, inversely heart-shaped, reflected at the sides; wings oblong, obtuse, somewhat curved upwards, approaching each other; keel rounded, of two united petals, with separate claws. Filaments ten, nine united into a compressed tube, open at the upper edge, the other hair-like, separate. Anthers small, roundish. Germen oblong, compressed. Style ascending, flattened vertically, dilated upwards, acute at the end. Stigma longitudinal, downy, running along the upper half of the style. Legume long, cylindrical or compressed, pointed, one-celled, two-valved. Seeds several, roundish.

* *Flowers solitary.*

L. A'phaca. Yellow Vetchling. Tendrils without leaves; stipules heart-shaped and arrow-shaped.——Stems procumbent or climbing by means of tendrils, each of which arises from between a pair of large stipules: flowers greenish-yellow. Annual: flowers from June to August: grows in the borders of sandy fields in England; rare. *Engl. Bot.* vol. xvii. pl. 1167. *Engl. Fl.* vol. iii. p. 274.

L. Nissólia. Crimson Vetchling. Leaves simple, without tendrils; stipules awl-shaped.——Stems slender, with sessile lance-shaped leaves, and crimson flowers. Annual: flowers in May: grows in the borders of fields, in England. *Engl. Bot.* vol. ii. pl. 112. *Engl. Fl.* vol. iii. p. 275.

** *Flowers in pairs.*

L. hirsútus. Rough-podded Vetchling. Tendrils with two narrow lance-shaped leaflets; legumes hairy; seeds rough.——Stem winged, slightly hairy, climbing: flowers variegated, the standard crimson, the wings pale blue, the keel white. Annual: flowers in July: grows in cultivated fields in England; rare. *Engl. Bot.* vol. xviii. pl. 1255. *Engl. Fl.* vol. iii. p. 275.

*** *Flowers numerous on each stalk.*

L. pratensis. Yellow Meadow Vetchling. Tendrils simple, each with two lance-shaped leaflets.——Stems weak, branched from one to two feet high: flowers yellow, eight or nine together, on long stalks. An excellent pasture plant. Perennial: flowers in July and August: grows in meadows and pastures. *Engl. Bot.* vol. x. pl. 670. *Engl. Fl.* vol. iii. p. 276.

L. sylvestris. Narrow-leaved Everlasting-pea. Tendrils branched, each with two sword-shaped leaflets; stem winged.——Stems climbing, three or four feet long: flowers on long axillar stalks; corolla variegated with pale crimson, blue, and green. Perennial: flowers in July and August: grows in thickets and hedges. *Engl. Bot.* vol. xii. pl. 805. *Engl. Fl.* vol. iii .p. 277.

L. latifolius. Broad-leaved Everlasting-pea. Tendrils branched, each with two elliptical leaflets; stem winged.——Stem climbing, three or four feet long: flowers large, rose-coloured. Perennial: flowers in July and August: grows in woods; rare. *Engl. Bot.* vol. xvi. pl. 1108. *Engl. Fl.* vol. iii. p. 277.

L. palustris. Blue Marsh Vetchling. Trendrils branched, each with several lance-shaped segments; stipules lance-shaped; stem winged. ——Flowers variegated with blue and purple. Perennial: flowers in July and August: grows in wet meadows and thickets; rare. *Engl. Bot.* vol. iii. pl. 169. *Engl. Fl.* vol. iii. p. 278.

10. VI'CIA.

Calyx inferior, tubular, unequal, with five acute segments, the two uppermost shorter. Corolla of five petals; standard largest, oval, ascending, the sides deflected, the back somewhat keeled; wings oblong, approaching each other, shorter than the standard; keel rounded, compressed, of two united petals, with separate claws. Filaments ten; nine united into a compressed tube, open at the upper edge, the other hair-like, separate. Anthers small, roundish. Germen oblong, compressed. Style short, ascending at a right angle, cylindrical. Stigma obtuse, with a tuft of hairs in front, below the summit. Legume long, compressed, pointed, one-celled, with two leathery, stiffish valves. Seeds several, roundish.

* *Stalks long, many-flowered.*

V. sylvatica. Wood Vetch. Leaflets elliptical; stipules crescent-shaped, deeply-toothed.——Stems numerous, climbing, five or six feet long: flowers numerous, in clusters longer than the leaves: petals bluish-white, veined with blue. Perennial: flowers in July and August: grows in bushy places and hedges. *Engl. Bot.* vol. ii. pl. 79. *Engl. Fl.* vol. iii. p. 279.

V. Cracca. Tufted Vetch. Flowers in imbricated clusters; leaflets lance-shaped, downy; stipules half arrow-shaped, nearly entire.—— Stems two or three feet long; flowers variegated with purple and blue. An excellent pasture plant. Perennial: flowers in July and August: grows in thickets, hedges, and pastures. *Engl. Bot.* vol. xvii. pl. 1168. *Engl. Fl.* vol. iii. p. 280.

** *Flowers axillar, nearly sessile.*

V. sativa. Common Vetch. Flowers nearly sessile, commonly in pairs, leaflets oblong, lower ones abrupt; stipules toothed, impressed with a dark spot; seeds smooth.——Stems procumbent or climbing, from two to three feet long; leaflets from six to ten; flowers variegated with crimson, blue, and white. Perennial: flowers in May and June: grows in corn-fields. *Engl. Bot.* vol. v. pl. 334. *Engl. Fl.* vol. iii. p. 281.

V. angustifólia. Narrow-leaved Crimson Vetch. Flowers solitary, nearly sessile; leaflets about six, linear, lower ones inversely heart-shaped; stipules impressed with a pale spot; seeds smooth.——Flowers crimson, white at the keel. Annual: flowers in June: grows in pastures. *Engl. Fl.* vol. iii. p. 282. *Engl. Bot. Suppl.* pl. 2614.

V. lathyroides. Spring Vetch. Flowers solitary, nearly sessile; leaflets about six, oblong, the lower ones inversely heart-shaped; tendrils simple, shorter than the leaflets; seeds tuberculated.——Stems procumbent, three or four inches long: stipules half heart-shaped, destitute of coloured mark: flowers small, light bluish-purple. Annual: flowers in April and May: grows in dry gravelly pastures; very common in Scotland. *Engl. Bot.* vol. i. pl. 30. *Engl. Fl.* vol. iii. p. 283.

V. lútea. Rough-podded Yellow Vetch. Flowers solitary, nearly sessile; legumes reflected, hairy; stems spreading; stipules egg-shaped, pointed, coloured; standard smooth.——Stems spreading on the ground, from one to two feet long; leaflets numerous, elliptical; tendrils long, branched: spot on the stipules red, generally enlarged: flowers pale yellow, striped with grey. Perennial: flowers in August: grows in dry gravelly pastures. *Engl. Bot.* vol. vii. pl. 481. *Engl. Fl.* vol. ii. p. 284.

V. hy'brida. Hairy-flowered Yellow Vetch. Flowers solitary, nearly sessile; legumes reflected, hairy; stems ascending; stipules egg-shaped, unspotted; standard hairy.——Stems from one to two feet long: flowers pale yellow, with reddish stripes. Perennial: flowers in June and July; grows in thickets, in the south of England; Glastonbury Tor-hill. *Engl. Bot.* vol. vii. pl. 482. *Engl. Fl.* vol. iii. p. 285.

V. lævigáta. Smooth-podded Sea Vetch. Flowers solitary, nearly sessile; legumes reflected, smooth; stems ascending; stipules cleft, without spot; leaflets bluntish, smooth.——Flowers pale blue or whitish: the whole plant smooth. Perennial: flowers in July and August: grows on the pebbly coast of Dorsetshire. *Engl. Bot.* vol. vii. pl. 483. *Engl. Fl.* vol. iii. p. 285.

V. sépium. Common Bush Vetch. Flowers about four together, in short axillar clusters; legumes erect, smooth; leaflets egg-shaped, obtuse, becoming gradually smaller upwards on the leaf-stalk.——Stems about two feet long; flowers bluish-purple: legumes blackish. Perennial: flowers in May and June: grows in bushy places, hedges, and pastures; common. *Engl. Bot.* vol. xxii. pl. 1515. *Engl. Fl.* vol. iii. p. 286.

V. bithy'nica. Rough-podded Purple Vetch. Flowers commonly solitary, stalked; legumes erect, rough with stiff hairs; leaflets four, lance-shaped, minutely pointed; stipules half-arrow-shaped, fringed

with teeth.——Stems about eighteen inches long, smooth, prostrate: standard purple: keel and wings white. Perennial: flowers in July and August: grows in bushy places and dry pastures. *Engl. Bot.* vol. xxvi. pl. 1842. *Engl. Fl.* vol. iii. p. 287.

11. ERVUM.

Calyx inferior, tubular, divided half way into five lance-shaped, long-pointed segments, shorter than the corolla, the lowermost rather longer. Corolla of five petals; standard largest, inversely egg-shaped, slightly reflected; wings half as long, obtuse; keel shorter, rounded, of two united petals, with separate claws. Filaments ten; nine united into a compressed tube, open along the upper edge; the other hair-like, separate. Anthers roundish. Germen oblong, compressed. Style cylindrical, ascending at a right angle. Stigma knobbed, all over hairy. Legume oblong, compressed. Seeds from two to four, roundish.

E. hirsútum. Hairy Tare. Clusters many-flowered; legumes hairy, two-seeded; leaflets abrupt.——Stem two or three feet long, nearly smooth; flowers whitish or pale blue. Annual: flowers in June and July: grows in fields and hedges; common. *Engl. Bot.* vol. xiv. pl. 970. *Engl. Fl.* vol. iii. p. 289.

E. tetraspérmum. Smooth Tare. Flowers in pairs; legumes smooth, four-seeded; leaflets oblong, bluntish.——Stem two or three feet long, more or less hairy, as are the leaves; flowers pale grey or bluish. Annual: flowers in June and July: grows in fields and hedges. *Engl. Bot.* vol. xvii. pl. 1223. *Engl. Fl.* vol. iii. p. 228.

12. ORNITHOPUS.

Calyx inferior, tubular, with five nearly equal, marginal teeth. Corolla of five petals; standard inversely egg-shaped, entire, ascending; wings rather smaller, inversely egg-shaped, curved upward; keel smaller, of two rounded, united petals, with separated claws. Filaments ten, nine united into a compressed tube, open along its upper edge, the other hair-like, separate; all curved upwards at the end. Anthers minute, roundish. Germen linear, compressed. Style slender, ascending. Stigma knobbed, bare. Legume curved, compressed, jointed, finally separating at the joints, each of which contains one roundish seed.

O. perpusillus. Common Bird's-foot. Leaves pinnate; flowers in heads; legumes curved inwards, bead-like.——Stems procumbent, from three to ten inches long; leaves of numerous pairs of elliptical, hairy leaflets: flowers three or four in each head, which is accompanied by a pinnate leaf: corolla white, veined with red, the keel greenish. Annual: flowers in May: grows in sandy pastures. *Engl. Bot.* vol. vi. pl. 369. *Engl. Fl.* vol. iii. p. 290.

13. HIPPOCRÉPIS.

Calyx inferior, bell-shaped, divided half way into five lance-shaped, acute, permanent segments; the two upper shorter. Corolla of five

petals, with claws longer than the calyx; standard heart-shaped, ascending; wings inversely egg-shaped, obtuse; keel rounded, pointed, of two united petals, with separated claws. Filaments ten, nine united into a tube, open along its upper edge, the other separate, all curved upwards at the end. Anthers roundish. Germen slender, compressed, tapering into an awl-shaped, ascending style. Stigma linear, smooth. Legume compressed, partly membranous, incurved, notched, with many curved joints, finally separating at the joints, each of which contains a single curved, oblong seed.

H. comósa. Tufted Horse-shoe Vetch. Legumes in umbels, curved downwards, not dilated at the margin.——Root woody: stems from six inches to a foot long; leaflets from seven to eleven, inversely egg-shaped, hairy beneath: flowers about six together, on long axillar or terminal stalks: flowers yellow, striated. Perennial: flowers from May to September: grows in dry pastures. *Engl. Bot.* vol. i. pl. 31. *Engl. Fl.* vol. iii. p. 291.

14. HEDY'SARUM.

Calyx inferior, tubular, divided half-way into five awl-shaped, straight segments. Corolla of five petals: standard egg-shaped, keeled at the back, slightly cleft, reflected at the sides; wings oblong, straight, narrower than the other petals; keel of two united petals, with separate claws, compressed, broader in front, and very abrupt. Filaments ten, nine united into a flattish tube, open above, the other awl-shaped, separate, all bent upwards at the extremity. Anthers roundish. Germen egg-shaped or oblong, compressed. Style awl-shaped, bent like the stamens. Stigma acute. Legume compressed, with one or more roundish joints, each joint two-valved and one-seeded. Seeds kidney-shaped.

H. Onóbrychis. Common Saint-foin. Cock's-head. Leaves pinnate, nearly smooth; legume one-seeded, toothed at the margin and ribs; wings not longer than the calyx; stem elongated.——Stems two or three feet long: flowers crimson, in axillar clusters. Cultivated for feeding cattle. Perennial: flowers in June and July: grows in dry hilly pastures. *Engl. Bot.* vol. ii. pl. 96. *Engl. Fl.* vol. iii. p. 292.

15. ASTRA'GALUS.

Calyx inferior, tubular, permanent, with five acute teeth, the lower gradually longer. Corolla of five petals; standard egg-shaped, obtuse, erect, longer than the rest; wings oblong, shorter; keel as long as the wings, rounded in front, of two united petals, with separate claws. Filaments ten, nine united into a compressed tube, open above, the other hair-like, separate. Anthers roundish. Germen oblong, compressed. Style awl-shaped, ascending. Stigma obtuse. Legume tumid, with two longitudinal cells. Seeds one or more, kidney-shaped.

A. glycyphy'llos. Sweet Milk-vetch. Stem prostrate; legumes obscurely three-cornered, curved, smooth; leaves longer than the flower-stalks; leaflets oval.——Stems two or three feet long, nearly smooth:

flowers pale yellow, in egg-shaped spikes, on short axillar stalks. Perennial: flowers in June: grows in woods, thickets, and pastures, in gravelly soil. *Engl. Bot.* vol. iii. pl. 203. *Engl. Fl.* vol. iii. p. 294.

A. hypoglóttis. Purple Mountain Milk-vetch. Stem prostrate; flowers in roundish heads; legumes egg-shaped, compressed, hairy, hooked at the point; leaflets obtuse.——Stems from two to six inches long: flowers purplish-blue variegated with white, in stalked axillar heads. Perennial: flowers in June and July: grows in dry pastures; not uncommon in Scotland near the sea. *Engl. Bot.* vol. iv. pl. 274. *Engl. Fl.* vol. iii. p. 294.

A. uralénsis. Hairy Mountain Milk-vetch. Stem none; flower-stalk erect, longer than the leaves; legumes oblong, pointed, hairy, erect; leaflets egg-shaped, acute, covered with silky hairs.——Flowers bluish-purple, in round dense heads. Perennial: flowers in July: grows in dry mountain pastures in Scotland; rare. *Engl. Bot.* vol. vii. pl. 466. *Engl. Fl.* vol. iii. p. 295.

A. campéstris. Yellowish Mountain Milk-vetch. Stem none; scape ascending; legumes egg-shaped, inflated, hairy, erect; leaflets lance-shaped, acute, somewhat hairy.——Flowers yellowish, the keel and wings tinged with purple. Perennial: flowers in July: found by Mr. G. Don in Angus-shire. *Engl. Bot.* vol. xxxvi. pl. 2522. *Engl. Fl.* vol. iii. p. 296.

16. TRIFO'LIUM.

Calyx inferior, tubular, five-toothed, permanent. Corolla of four petals, all more or less united by their long claws, generally permanent, withering; standard reflected; wings oblong, shorter than the standard; keel of one petal, shorter than the wings. Filaments ten, nine united into a compressed tube, the other hair-like, separate. Anthers roundish. Germen oblong. Style awl-shaped, curved upwards. Stigma simple, smooth. Legume short, membranous, one-valved, one-celled, not bursting, hardly longer than the calyx. Seeds from one to four, roundish, smooth.

* *Flowers in clusters or spikes.*

T. officinále. Common Melilot. Clusters with the flowers pointing one way; legume protruding, acute, transversely wrinkled, hairy, two-seeded; stem erect; stipules awl-shaped.——Stem two or three feet high, erect, branched, angular; leaflets serrate: flowers yellow, in axillar, long-stalked clusters. In drying it emits a strong smell, resembling that of new hay. Cultivated as food for cattle. Annual: flowers in June and July: grows in thickets, hedges, and borders of fields. *Engl. Bot.* vol. xix. pl. 1340. *Engl. Fl.* vol. iii. p. 297.

** *Flowers in heads; legumes many-seeded.*

T. ornithopodioides. Bird's-foot Trefoil. Flowers about three in each head; legume protruding, eight-seeded, twice as long as the calyx; stems decumbent.——Stem from three to five inches long: flowers rose-coloured. Annual: flowers in June and July: grows in dry, sandy, or gravelly pastures. *Engl. Bot.* vol. xv. pl. 1047. *Engl. Fl.* vol. iii. p. 298.

T. répens. White Trefoil. Dutch Clover. Heads of flowers stalked, spherical, the flowers on short stalks; legume four-seeded, included within the calyx; stems creeping: leaflets inversely heart-shaped.——Stems from six to twelve inches long: flowers white, fragrant: leaflets generally brown on the back. A valuable pasture plant, supposed erroneously to indicate a rich soil. Perennial: flowers from May to September: grows in meadows and pastures, abundantly. *Engl. Bot.* vol. xxv. pl. 1769. *Engl. Fl.* vol. iii. p. 292.

T. suffocátum. Suffocated Trefoil. Heads of flowers sessile, lateral, roundish; legume two-seeded, concealed within the calyx; teeth of the calyx lance-shaped, acute, recurved, longer than the corolla.——The whole plant generally buried in sand: flowers pale rose-colour. Annual: flowers in June and July: grows on the sandy sea-coast, at Yarmouth, and other places in England. *Engl. Bot.* vol. xv. pl. 1049. *Engl. Fl.* vol. iii. p. 300.

*** *Flowers in heads; legumes one-seeded, calyx generally hairy.*

T. subterráneum. Subterraneous Trefoil. Heads of about four flowers, hairy; a central, reflected, stiff, starry tuft of fibres from the top of the stalk embracing the fruit.——Stems pressed close to the ground, from three to six inches long, hairy: flowers white, at first erect, afterwards bent to the ground, their stalk sending out from its extremities several fibres. Annual: flowers in May: grows in dry gravelly pastures. *Engl. Bot.* vol. xv. pl. 1048. *Engl. Fl.* vol. iii. p. 300.

T. ochroleúcum. Sulphur-coloured Trefoil. Flowers in a solitary, terminal head; stem erect, downy; lower leaflets inversely heart-shaped; lowest tooth of the calyx thrice as long as the rest.——Stems from twelve to eighteen inches high: flowers pale yellow. Perennial: flowers in June and July: grows in dry pastures. *Engl. Bot.* vol. xvii. pl. 1224. *Engl. Fl.* vol. iii. p. 301.

T. praténse. Common Purple Clover. Heads dense, egg-shaped; stems ascending; petals unequal; lower calyx-tooth longer than the rest, which are equal; stipules egg-shaped, bristle-pointed.——Stems about a foot high: leaflets elliptical, entire, nearly smooth: flowers purple, sweet-scented. A valuable pasture plant, extensively cultivated. Perennial: flowers in June and July: grows in pastures; common. *Engl. Bot.* vol. xxv. pl. 1770. *Engl. Fl.* vol. iii. p. 302.

T. médium. Zig-zag Trefoil. Heads egg-shaped, loose; stems zig-zag; petals nearly equal; two upper calyx-teeth rather shorter; stipules linear, parallel.——Stems about a foot high, branched: leaflets elliptical, notched, hairy: flowers purple. Perennial: flowers in June and July: grows in dry pastures and thickets. *Engl. Bot.* vol. iii. pl. 190. *Engl. Fl.* vol. iii. p. 302.

T. maritimum. Teasel-headed Trefoil. Heads egg-shaped, somewhat hairy; stipules lance-shaped, erect; calyx-teeth after flowering dilated, leafy; leaflets inversely egg-shaped.——Stems spreading, about a foot long: flowers pale red. Annual: flowers in June and July: grows in salt marshes, on the eastern and southern coasts of England. *Engl. Bot.* vol. iv. pl. 220. *Engl. Fl.* vol. iii. p. 303.

T. stellátum. Starry-headed Trefoil. Heads roundish, hairy; stipules elliptical; calyx-teeth longer than the corolla, after flowering

dilated, leafy, the tube closed; leaflets inversely heart-shaped.——Stems spreading, hairy: flowers light crimson. Annual: flowers in July and August: found by Mr. Borrer between Shoreham harbour, in Sussex, and the sea. *Engl. Bot.* vol. xxii. pl. 1545. *Engl. Fl.* vol. iii. p. 304.

T. arvénse. Hare's-foot Trefoil. Heads oval, very hairy; stipules lance-shaped, bristle-pointed; calyx-teeth longer than the corolla, permanently bristle-shaped; leaflets narrow, inversely egg-shaped.——Stem from four inches to a foot high, erect, branched: flowers with pale red or white petals. Annual: flowers in July and August: grows in dry pastures and fields. *Engl. Bot.* vol. xiv. pl. 944. *Engl. Fl.* vol. iii. p. 305.

T. scábrum. Hard-knotted Trefoil. Heads egg-shaped, sessile, axillar; calyx-teeth unequal, lance-shaped, stiff, ultimately recurved; stems procumbent.——Stems from three to nine inches long, stiff, hairy: flowers whitish. Annual: flowers in May and June: grows in dry sandy fields, in various parts of England. *Engl. Bot.* vol. xiii. pl. 903. *Engl. Fl.* vol. iii. p. 306.

T. glomerátum. Smooth round-headed Trefoil. Heads hemispherical, sessile, axillar; calyx-teeth heart-shaped, veiny, smooth, reflected; stems prostrate.——Stems from three inches to a foot long, straight: flowers rose-coloured. Annual: flowers in June: grows in gravelly fields and pastures in England. *Engl. Bot.* vol. xv. pl. 1063. *Engl. Fl.* vol. iii. p. 207.

T. striátum. Soft Knotted Trefoil. Heads egg-shaped, sessile, axillar and terminal; calyx eliptical, furrowed, hairy, with bristle-shaped teeth; stems procumbent.——From four to ten inches long: flowers pale rose-coloured. Annual: flowers in June: grows in sandy fields and pastures, in England and Scotland. *Engl. Bot.* vol. xxvi. pl. 1843. *Engl. Fl.* vol. iii. p. 307.

**** *Legumes one-seeded. Calyx of the fruit inflated.*

T. fragíferum. Strawberry-headed Trefoil. Heads roundish, upon long stalks; calyx at length inflated, membranous, two of its teeth reflected; stems creeping.——Stems prostrate, creeping, smooth: leaflets inversely heart-shaped, serrate: flowers rose-coloured: calyces finally red, the head in this state resembling a strawberry. Perennial: flowers in July and August: grows in meadows and pastures. *Engl. Bot.* vol. xv. pl. 1050. *Engl. Fl.* vol. iii. p. 388.

***** *Legumes one-seeded. Standards finally deflected, dry and membranous.*

T. procúmbens. Hop Trefoil. Heads oval, many-flowered; standard finally deflected, furrowed; stems spreading or procumbent; common leaf-stalk longer than the middle partial leaf-stalk.——Stems very numerous, spreading all round, from four inches to a foot long: heads of about fifty bright yellow flowers. Annual: flowers in June and July: grows in dry pastures; common. *Engl. Bot.* vol. xiv. pl. 945. *Eng. Fl.* vol. iii. p. 309.

T. minus. Lesser Yellow Trefoil. Heads hemispherical; common flower-stalks straight, stiff; standard nearly even; stems prostrate;

common leaf-stalk very short.——Stems numerous, from three inches to a foot long: flowers almost sessile, yellow, from twelve to fifteen in each head. Annual: flowers in June and July: grows in dry pastures; common. *Engl. Bot.* vol. xviii. pl. 1256. *Engl. Fl.* vol. iii. p. 310.

T. filiförme. Slender yellow Trefoil. Clusters loose, few-flowered; common flower-stalks thread-like, waved; standard even; stems prostrate; common leaf-stalk shorter than the nearly sessile middle leaflet. ——Stems thread-like, from four to ten inches long: flowers yellow, three or four only in each cluster. Annual: flowers in June and July: grows in dry pastures; common. *Engl. Bot.* vol. xviii. pl. 1257. *Engl. Fl.* vol. iii. p. 311.

17. LOTUS.

Calyx inferior, tubular, permanent, with five acute, nearly equal teeth. Corolla of five petals, deciduous; standard inversely egg-shaped, ascending with a vaulted claw; wings oblong, obtuse, approaching each other, shorter than the standard; keel prominent beneath, closed above, of two united petals, with an ascending point, and short separated claws. Filaments ten, nine united into a compressed tube, split above, the other hair-like, separate, all generally dilated under the anthers. Anthers small, roundish. Germen cylindrical. Style thread-shaped, ascending at a right angle. Stigma simple. Legume cylindrical, straight, much longer than the calyx, two-valved, one-celled, the seeds separated by a spongy substance. Seeds globular.

L. corniculátus. Common Bird's-foot Trefoil. Heads few-flowered, depressed; stems procumbent; legumes spreading, nearly cylindrical; claw of the standard broad; filaments all dilated under the anthers. —— Stems several, spreading all round, from four to ten inches long: flowers about three in each head, bright yellow, generally streaked with red. Perennial: flowers from May to September: grows in pastures, abundantly. An excellent pasture plant. *Engl. Bot.* vol. xxx. pl. 2090. *Engl. Fl.* vol. iii. p. 312.

L. májor. Greater Bird's-foot Trefoil. Heads many-flowered, depressed; stems erect, hollow; legumes drooping, cylindrical; claw of the standard linear; shorter filaments not dilated.——Stems erect, from one to two feet high, succulent and tubular: flowers from six to twelve, yellow. Perennial: flowers in July and August: grows in moist pastures, and by ditches and hedges. *Engl. Bot.* vol. xxx. pl. 2091. *Engl. Fl.* vol. iii. p. 313.

L. angustis'simus. Slender Bird's-foot Trefoil. Flowers solitary, or in pairs; stems tubular, much branched, prostrate; legumes two-edged, very slender; calyx loosely hairy, its teeth fringed, twice as long as the tube.——Stems from six to ten inches long: flowers yellow. Perennial: flowers in May and June: grows in meadows on the southern and western coasts of England. *Engl. Bot.* vol. xiii. *pl. 925. Engl. Fl.* vol. iii. p. 315.

18. MEDICA'GO.

Calyx inferior, tubular, permanent, with five acute nearly equal teeth. Corolla of five petals, deciduous; standard egg-shaped, ascending, with a short broad claw; wings inversely egg-shaped, cohering by their lower edges; keel of two united petals with separate claws, oblong, obtuse, depressed by the germen, and finally spreading widely. Filaments ten, nine united nearly to their summits into a compressed tube, split above, the other hair-like, separate. Anthers small, roundish. Germen stalked, oblong, compressed, incurved or spiral, starting elastically from the keel, and forcing back the standard. Style awl-shaped, straight, ascending. Stigma terminal, minute. Legume compressed, inflected, sickle-shaped, or spiral, one-celled, two-valved. Seeds several, kidney-shaped, smooth.

M. falcáta. Yellow Sickle Medick. Clusters erect; legumes sickle-shaped; stem procumbent.——Stems about two feet long: flowers pale yellow, sometimes green, occasionally purple. Perennial: flowers in June and July: grows on dry banks and old walls, in some parts of England. *Eng. Bot.* vol. xv. pl. 1016. *Engl. Fl.* vol. iii. p. 317.

M. lupulína. Black Medick Nonesuch. Spikes egg-shaped, erect; legumes kidney-shaped, one-seeded; stem procumbent.——Resembles *Trifolium minus* in its stems and yellow flowers. Annual: flowers from June to September: grows in pastures and fields; common. *Engl. Bot.* vol. xiv. pl. 971. *Engl. Fl.* vol. iii. p. 318.

M. maculáta. Spotted Medick. Stalks two or three-flowered; leaflets inversely heart-shaped, spotted; stipules acutely toothed; legumes spiral, depressed, fringed with long bristles.——Stems prostrate: leaflets marked in the centre with an irregular dark spot: flowers yellow. Annual: flowers in May and June: grows in gravelly soil in the south of England. *Engl. Bot.* vol. xxiii. pl. 1616: *M. polymorpha. Engl. Fl.* vol. iii. p. 319.

M. muricáta. Flat-toothed Medick. Stalks two or three-flowered; leaflets inversely heart-shaped, hairy; stipules deeply toothed: legumes even, with short, depressed teeth in a single row.——Stems procumbent. Annual: flowers in June and July: grows at Orford in Suffolk, according to Ray. *Engl. Fl.* vol. iii. p. 320.

M. minima. Little Bur Medick. Stalks many-flowered; stipules half egg-shaped, nearly entire; leaflets inversely egg-shaped, hairy; legumes globular, with two rows of hooked prickles.——Prostrate and silky: flowers yellow. Annual: flowers in June and July: grows in sandy fields: found by Mr. Woodward, at Narborough, in Norfolk, and by Mr. D. Turner, near Newmarket. *Engl. Fl.* vol. iii. p. 321.

Class XVIII. POLYADELPHIA.

Filaments united, forming more than two sets.

Order. I. POLYANDRIA. *Numerous Stamens.*

1. HYPERICUM. Calyx inferior, deeply divided into five seg-

ments. *Petals* five. *Filaments* united into three or five sets. *Capsule* many-seeded.

POLYADELPHIA—POLYANDRIA.

1. HYPE'RICUM.

Calyx inferior, of one leaf, deeply divided into five nearly egg-shaped, concave, permanent segments. Petals five, egg-shaped or oblong, obtuse, expanding, overlapping each other laterally. Filaments numerous, hair-like, united at the base into three or five sets. Anthers small, roundish. Germen superior, egg-shaped. Styles varying from five to one, simple, distant. Stigmas simple. Capsule roundish, with as many cells as there are styles. Seeds numerous.

H. calycínum. Large-flowered St. John's-wort. Styles five; flowers solitary; stem woody, four-cornered, branched; segments of the calyx inversely egg-shaped, obtuse; leaves oblong.——Root creeping: stems erect, twelve or eighteen inches high: leaves leathery, ever-green, very shortly stalked: flowers golden yellow. A shrub: flowers in July and August. Found by Mr. Hopkirk in woods near Largs. *Engl. Bot.* vol. xxix. pl. 2017. *Engl. Fl.* vol. iii. p. 323.

H. Androsæ'mum. Tutsan. Styles three; capsule pulpy; stem woody, compressed; leaves egg-shaped, sessile.——Two or three feet high: flowers yellow, in terminal panicles: capsule purplish-black. A shrub: flowers in July: grows rarely in England, not uncommon in the west of Scotland. *Engl. Bot.* vol. xviii. pl. 1225. *Engl. Fl.* vol. iii. p. 323.

H. quadrángulum. Square St. John's-wort. Styles three; stem herbaceous, acutely four-cornered; leaves egg-shaped, with pellucid dots; segments of the calyx lance-shaped.——Root creeping: stems from one to two feet high, erect, leafy, with numerous leafy opposite branches: leaves in pairs, sessile: petals yellow, generally streaked with dark purple. Perennial: flowers in July and August: grows in moist meadows and hedges; common. *Engl. Bot.* vol. vi. pl. 370. *Engl. Fl.* vol. iii. p. 324.

H. perforátum. Perforated or *Common St. John's-wort.* Styles three; stem two-edged; leaves elliptical, with pellucid dots; segments of the calyx lance-shaped.——Stem from one to two feet high, branched: flowers bright yellow, dotted and streaked with dark purple, in terminal panicles: petals and calyx fringed with small black glands. This plant has long held a place in the Materia Medica, being aromatic and stimulant. The flowers tinge spirits and oils of a fine purple colour. Perennial: flowers in June and July: grows in dry pastures, woods, and open heaths; common. *Engl. Bot.* vol. v. pl. 295. *Engl. Fl.* vol. iii. p. 325.

H. dúbium. Imperforate St. John's wort. Styles three; stem obscurely four-cornered; leaves elliptical, obtuse, without pellucid dots; segments of the calyx elliptical.——Stem from one to two feet high: flowers bright yellow, in terminal panicles: petals and calyx dotted

and blotched with dark purple. Perennial: flowers in July and August: grows in rather mountainous woods; rare. *Engl. Bot.* vol. v. pl. 296. *Engl. Fl.* vol. iii. p. 326.

H. humifúsum. Trailing St. John's-wort. Styles three: stem compressed, prostrate; leaves elliptical, smooth; segments of the calyx egg-shaped.——Stems branched, from six inches to a foot long: margins of the leaves with dark spots: petals and segments of the calyx more or less fringed with black glands. Perennial: flowers in July: grows in pastures and on dry heaths; not very common. *Eng. Bot.* vol. xviii. pl. 1226. *Eng. Fl.* vol. iii. p. 326.

H. montánum. Mountain St. John's-wort. Styles three; stem erect, round, smooth; leaves egg-shaped, smooth, embracing the stem; calyx with glandular serratures.——Stems about two feet high, simple, leafy: leaves small, sprinkled with small pellucid dots, their margins with black glandular dots: petals pale-yellow: bracteas and calyx margined with black glands. Perennial: flowers in July: grows in hilly places, in woods and thickets; not common. *Engl. Bot.* vol. vi. pl. 371. *Engl. Fl.* vol. iii. p. 327.

H. barbátum. Bearded St. John's-wort. Styles three; stem erect, rounded; leaves egg-shaped, smooth, embracing the stem, dotted and glandular; calyx and petals fringed and dotted.——Stem about a foot high, slightly four-cornered above: flowers bright yellow, in a terminal panicle: calyx and bracteas fringed with long hairs: petals toothed and glandular at the tip. Perennial: flowers in September and October. Found in Strathearn, Perthshire, by Mr. G. Don. *Engl. Bot.* vol. xxviii. pl. 1986. *Engl. Fl.* vol. iii. p. 328.

H. hirsútum. Hairy St. John's-wort. Styles three; stem erect, rounded; leaves egg-shaped, downy; segments of the calyx lance-shaped, with glandular serratures.——Stems about two feet high, numerous, erect, downy, as well as the leaves: flowers bright yellow, very numerous; bracteas and segments of the calyx fringed with black glands. Perennial: flowers in July: grows in woods and thickets. *Engl. Bot.* vol. xvii. pl. 1156. *Engl. Fl.* vol. iii. p. 328.

H púlchrum. Small Upright St. John's-wort. Styles three; stem erect, round; leaves heart-shaped, smooth, clasping the stem; segments of the calyx egg-shaped, with glandular serratures.——Stem about a foot high, panicled at the top. The whole plant smooth. Petals bright yellow, tipped externally with red, fringed, like the calyx, with black glands. Perennial: flowers in July: grows in woods, on heaths, and in dry pastures. *Engl. Bot.* vol. xviii. pl. 1227. *Engl. Fl.* vol. iii. p. 329.

H. elódes. Marsh St. John's-wort. Styles three; stem procumbent, creeping, round; leaves roundish, hairy; segments of the calyx obtuse with glandular serratures.——Stems about six inches long, branched at the base, prostrate, hairy, as are the leaves: flowers pale yellow. Perennial: flowers in July and August: grows in boggy places; not common. *Engl. Bot.* pl. 109. *Eng. Fl.* vol. iii. p. 330.

Class XIX. SYNGENESIA.

Plants bearing compound Flowers having their anthers united into a tube.

Order I. POLYGAMIA ÆQUALIS.

Florets all perfect, each having five stamens and one pistil, and producing one seed.

* *All the corollas strap-shaped.*

10. HYPOCHŒ'RIS. *Receptacle* chaffy. *Seed-down* feathery. *Calyx* oblong, imbricated.
12. CICHO'RIUM. *Receptacle* slightly chaffy. *Seed-down* chaffy, shorter than the seed. *Calyx* double.
9. CRE'PIS. *Receptacle* roughish. *Seed-down* simple. *Calyx* double; the outer lax, tumid, deciduous.
8. HIERA'CIUM. *Receptacle* nearly naked, dotted. *Seed-down* simple, sessile. *Calyx* egg-shaped, imbricated.
7. APA'RGIA. *Receptacle* naked, dotted. *Seed-down* feathery, sessile, unequal. *Calyx* double; the inner imbricated.
2. PI'CRIS. *Receptacle* naked. *Seed-down* feathery. *Calyx* double; inner of equal leaves; outer lax.
1. TRAGOPO'GON. *Receptacle* naked. *Seed-down* feathery, stalked. *Calyx* simple, of equal leaves in two rows.
6. LEO'NTODON. *Receptacle* naked. *Seed-down* feathery, stalked. *Calyx* nearly egg-shaped, imbricated.
4. LACTU'CA. *Receptacle* naked. *Seed-down* simple, stalked. *Calyx* imbricated, simple, cylindrical; scales membranous at the margin.
5. PRENA'NTHES. *Receptacle* naked. *Seed-down* simple, nearly sessile. *Calyx* double. *Florets* few.
3. SON'CHUS. *Receptacle* naked, dotted. *Seed-down* simple, sessile. *Calyx* imbricated, simple, swelled at the base.
11. LAPSA'NA. *Receptacle* naked. *Seed-down* none. *Calyx* having scales at the base.

** *Corollas all tubular, generally spreading so as to form a hemispherical head.*

18. CARLI'NA. *Receptacle* chaffy. *Seed-down* feathery. *Calyx* swelling; the outer scales thorny; the inner coloured, polished, membranous.
13. AR'CTIUM. *Receptacle* chaffy. *Seed-down* simple. *Calyx* globose, imbricated; the scales thorny, hooked, inflected.
15. CA'RDUUS. *Receptacle* hairy. *Seed-down* simple, roughish, deciduous. *Calyx* swelled, imbricated; the scales thorny.
16. CNI'CUS. *Receptacle* hairy. *Seed-down* feathery, deciduous. *Calyx* swelled, imbricated; the scales thorny.
17. ONOPO'RDUM. *Receptacle* cellular, somewhat chaffy. *Seed-down* rough, deciduous. *Calyx* swelled: scales thorny, spreading.
14. SERRA'TULA. *Receptacle* chaffy. *Seed-down* stiff, persistent. *Calyx* nearly cylindrical, imbricated; the scales thornless.

(Centaurea Jacea.)

**** Corollas all tubular, parallel, crowded, forming nearly a level surface at the top.*

19. BI'DENS. *Receptacle* chaffy. *Seed-down* rough with reversed prickles. *Calyx* of many parallel, channelled scales. *Corolla* sometimes radiated.
22. DIO'TIS. *Receptacle* chaffy, with hair-tipped scales. *Seed-down* none. *Calyx* imbricated, hemispherical. *Corollas* with two ears bordering the seed.
20. EUPATO'RIUM. *Receptacle* naked. *Seed-down* rough. *Calyx* imbricated, oblong. *Style* cleft half-way down, protruded.
21. CHRYSO'COMA. *Receptacle* naked. *Seed-down* rough. *Calyx* scarcely longer than the corolla.

(*Tenacetum. Senecio vulgaris. Aster Tripolium. Anthemis nobilis.*)

Order II. POLYGAMIA SUPERFLUA.

Florets all fertile, those of the disk furnished with five stamens and one pistil, those of the circumference with a pistil alone.

** Corollas of the marginal florets obsolete or inconspicuous.*

23. TENACE'TUM. *Receptacle* naked. *Seed* with a membranous crown. *Calyx* imbricated, hemispherical. *Marginal florets* three-cleft, obsolete, sometimes wanting.
26. CON'YZA. *Receptacle* naked. *Seed-down* rough. *Calyx* imbricated, roundish. *Marginal florets* three-cleft.
25. GNAPHA'LIUM. *Receptacle* naked. *Seed-down* rough or feathery. *Calyx* imbricated, with membranous, coloured scales. *Marginal florets* awl-shaped.
24. ARTEMI'SIA. *Receptacle* naked or hairy. *Seed-down* none. *Calyx* imbricated. with rounded converging scales. *Marginal florets* awl-shaped, entire.

(*Tussilago Farfara* and *hybrida.*)

*** Corollas of the marginal florets strap-shaped.*

35. BE'LLIS. *Receptacle* naked, conical. *Seed-down* none. *Calyx* hemispherical; scales equal. *Seed* inversely egg-shaped.
38. MATRICA'RIA. *Receptacle* naked, nearly cylindrical. *Seed-down* none. *Calyx* hemispherical or nearly plane, imbricated; the scales membranous on the edges.
36. CHRYSA'NTHEMUM. *Receptacle* naked, a little convex. *Seed-down* none. *Calyx* hemispherical, imbricated; the scales with a dilated membranous border.
37. PYRE'THRUM. *Receptacle* naked. *Seed* crowned with a membranous border. *Calyx* hemispherical, imbricated; the scales rather acute, membranous at the edges.
34. DORO'NICUM. *Receptacle* naked. *Seed-down* simple, wanting on the marginal seeds. *Calyx* a double row of equal scales, longer than the disk.
32. I'NULA. *Receptacle* naked. *Seed-down* simple. *Calyx* hemispherical, imbricated. *Marginal florets* very numerous, linear. *Anthers with two bristles* at the base.

27. ERI'GERON. *Receptacle* naked. *Seed-down* simple. *Calyx* imbricated. *Marginal florets* numerous, linear, very narrow. *Anthers* without bristles.

31. SOLIDA'GO. *Receptacle* naked, pitted. *Seed-down* simple. *Calyx* imbricated, its scales close. *Marginal florets* about five.

30. A'STER. *Receptacle* naked. *Seed-down* simple. *Calyx* imbricated, the lower scales spreading. *Marginal florets* more than ten.

29. SENE'CIO. *Receptacle* naked. *Seed-down* simple. *Calyx* double; the inner cylindrical, of equal scales; the outer of several minute ones; all the scales withered-looking at the tip.

28. TUSSILA'GO. *Receptacle* naked. *Seed-down* simple. *Calyx* simple, swelled at the base; scales numerous, equal, somewhat membranous.

33. CINERA'RIA. *Receptacle* naked. *Seed-down* simple. *Calyx* simple, cylindrical; scales numerous, equal. *Seed* four-cornered.

39. A'NTHEMIS. *Receptacle* convex, chaffy. *Seeds* crowned with a membranous border. *Calyx* hemispherical; its scales nearly equal, their margins membranous.

40. ACHILLE'A. *Receptacle* flat, chaffy. *Seed-down* none. *Calyx* egg-shaped, imbricated; the scales unequal. *Marginal florets* few, roundish.

(Bidens cernua.)

Order III. POLYGAMIA FRUSTRANEA.

Florets of the disk perfect and fertile; those of the circumference destitute of both stamens and pistil.

41. CENTAURE'A. *Receptacle* bristly. *Seed-down* simple or feathery. *Calyx* imbricated. *Marginal florets* funnel-shaped, dilated, irregular.

POLYGAMIA ÆQUALIS.

1. TRAPO'GON.

Common calyx simple, of several lance-shaped equal scales, arranged alternately in two rows, all connected at the base, permanent. Compound corolla imbricated, uniform. Florets numerous, all perfect, strap-shaped, abrupt, five-toothed. Filaments five, hair-like, very short. Anthers united into a tube. Germen inversely egg-shaped. Style thread-shaped, as long as the anthers. Stigmas two, revolute. Seeds inclosed by the permanent calyx, one to each floret, oblong, angular, striated, tapering at both ends, crowned by the seed-down, which is feathery and supported on a long stalk; receptacle naked, flat, rough.

T. praténsis. Yellow Goat's-beard. Calyx about as long as the corolla; leaves tapering, keeled, dilated at the base, smooth; flower-stalk cylindrical.——The whole plant smooth, abounding with milky juice: stems erect, round, leafy, from one to two feet high: flowers yellow. Biennial: flowers in June: grows in pastures. *Engl. Bot. vol. vii. pl.* 434. *Engl. Fl.* vol. iii. p. 337.

T. porrifólius. Purple Goat's-beard. Calyx much longer than the corolla; leaves tapering; flower-stalk enlarged upwards.——The whole plant smooth; stem three or four feet high, erect; flowers purple. Biennial: flowers in May and June: grows in moist meadows and pastures. *Engl. Bot.* vol. ix. pl. 638. *Engl. Fl.* vol. iii. p. 338.

2. PI'CRIS.

Common calyx double; the outer of several flat scales; the inner egg-shaped, of many equal parallel leaves. Corolla compound, imbricated, uniform: florets numerous, perfect, strap-shaped, abrupt, five-toothed. Filaments five, hair-like, very short. Anthers united into a tube. Germen nearly egg-shaped. Style thread-shaped, as long as the stamens. Stigmas two, reflected. Seeds one to each floret, swelled, obtuse, transversely wrinkled: seed-down feathery, sessile or stalked. Receptacle naked, dotted.

P. echioides. Bristly Ox-tongue. Outer calyx of five broad, prickly scales; seed-down stalked; leaves waved.——Stem two or three feet high, round, furrowed: lower leaves lance-shaped, upper heart-shaped, embracing the stem. Flowers bright yellow. Annual: flowers in June and July: grows in hedges and borders of fields, in England. *Engl. Bot.* vol. xiv. pl. 972. *Engl. Fl.* vol. iii. p. 339.

P. hieracioides. Hawkweed Ox-tongue. Outer calyx of numerous scales, much shorter than the inner; leaves lance-shaped, waved, the lower ones toothed; seed-down sessile: stem rough.——Stem three feet high, furrowed, rough; leaves lance-shaped, acute, hairy: flowers bright yellow. Biennial: flowers in July and August: grows on dry banks and in the borders of fields. *Engl. Bot.* vol. iii. pl. 196. *Engl. Fl.* vol. iii. p. 340.

3. SO'NCHUS.

Common calyx swelled at the base, of numerous, linear, imbricated, unequal scales. Compound corolla imbricated, uniform: florets numerous, perfect, equal, strap-shaped, abrupt, with four or five teeth. Filaments five, hair-like, very short. Anthers united into a cylindrical tube. Germen somewhat inversely egg-shaped. Style thread-shaped, as long as the stamens. Stigmas two, reflected. Seeds oblong, roughish, inclosed by the permanent calyx, which converges into a globular, pointed form: seed-down of many simple hairs, sessile. Receptacle naked, dotted.

S. cærúleus. Blue Sow-thistle. Flower-stalks and calyx bristly; leaves somewhat lyre-shaped, their terminal lobe triangular and very large.——Stems three feet high, erect, furrowed, smooth below, hairy above: flowers large, numerous, purplish-blue. Perennial: flowers in July and August: grows on some of the higher mountains of Angusshire and Aberdeenshire. *Engl. Bot.* vol. xxxiv. pl. 2425. *Engl. Fl.* vol. iii. p. 341.

S. palústris. Tall Marsh Sow-thistle. Flower-stalks and calyx bristly, somewhat umbellate; leaves runcinate, rough-edged, arrow-shaped at the base.——*Stem from four to* eight feet high, angular, hollow: leaves

large, smooth: panicles terminal, somewhat umbellate: flowers pale yellow. Perennial: flowers in July and August: grows in marshy places and on the banks of rivers. *Engl. Bot.* vol. xiii. pl. 935. *Engl. Fl.* vol. iii. p. 342.

S. arvénsis. Corn Sow-thistle. Flower-stalks and calyx bristly, somewhat umbellate; leaves runcinate, finely toothed, heart-shaped at the base; root creeping.——Stem three or four feet high, round, hollow, rough above with black hairs; flowers large, deep yellow. Perennial: flowers in August: grows in corn-fields and hedges; common. *Engl. Bot.* vol. x. pl. 674. *Engl. Fl.* vol. iii. p. 342.

S. oleráceus. Common Sow-thistle. Flower-stalks cottony, cymose; calyx smooth; leaves runcinate, toothed.——Stem from one to two feet high, round, smooth, hollow: corolla pale yellow. Subject to numberless variations, but in all its states easily distinguishable. Annual: flowers from June to October: grows in cultivated ground, the borders of fields, waste places, and hedges; common. *Engl. Bot.* vol. xii. pl. 843. *Engl. Fl.* vol. iii. p. 343.

4. LACTU'CA.

Common Calyx cylindrical, of numerous, pointed, imbricated, unequal, flat scales, membranous at the margin. Compound Corolla imbricated, uniform: florets numerous, perfect, equal, strap-shaped, abrupt, with four or five teeth. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen somewhat egg-shaped. Style thread-shaped, as long as the stamens. Stigmas two, reflected. Seeds egg-shaped, furrowed, roughish, compressed; seed-down hair-like, stalked. Receptacle naked, dotted.

L. virósa. Strong-scented Lettuce. Leaves horizontal, toothed; their keel prickly.——Stem two or three feet high, erect, round, smooth; root-leaves numerous, inversely egg-shaped; stem-leaves smaller, frequently lobed, arrow-shaped and embracing at the base: flowers numerous, pale yellow, panicled. The whole plant abounds with an acrid milky juice, having the narcotic properties of opium. Biennial: flowers in August and September: grows in borders of fields and about hedges and old walls. *Engl. Bot.* vol. xxviii. pl. 1957. *Engl. Fl.* vol. iii. p. 345.

L. Scariola. Prickly Lettuce. Leaves perpendicular, sinuated, finely toothed, their keel prickly.——Stem two or three feet high, erect, panicled: leaves variously pinnatifid and sinuate: flowers pale yellow. It abounds in acrid milky fluid like the last. Perennial: flowers in August: grows in waste ground and the borders of fields. *Engl. Bot.* vol. iv. pl. 268. *Engl. Fl.* vol. iii. p. 346.

L. saligna. Least Lettuce. Leaves linear, halbert-shaped, sessile, their keel prickly.——Stem two feet high, waved: leaves embracing the stem: flowers pale yellow: milky. Biennial: flowers in August: grows in waste ground and salt marshes; rare. *Engl. Bot.* vol. x. pl. 707. *Engl. Fl.* vol. iii. p. 347.

5. PRENA'NTHES.

Common calyx cylindrical, double; the inner of as many linear equal scales as there are florets; the outer of a few, very short unequal

scales. Compound corolla of a single row of perfect, equal, strap-shaped, abrupt, four or five-toothed florets. Filaments five, hair-like, very short. Anthers united into a slender cylindrical tube. Germens oblong. Style hair-like, longer than the stamens. Stigmas two, revolute. Seeds oblong, furrowed: seed-down hair-like, roughish, sessile. Receptacle naked, very narrow.

P. murālis. Ivy-leaved Wall Lettuce. Florets five; leaves runcinate. ——Stem a foot high, round, hollow, panicled above: leaves embracing the stem: flowers erect, bright yellow, with a purplish calyx. Perennial: flowers in July: grows on old walls and rocks. *Engl. Bot.* vol. vii. pl. 457. *Engl. Fl.* vol. iii. p. 348.

6. LEO'NTODON.

Common calyx oblong, double; the inner of several linear, equal, parallel scales; the outer of fewer and shorter ones. Compound corolla of very numerous, imbricated, equal, perfect, strap-shaped, abrupt, five-toothed florets. Filaments hair-like, short. Anthers united into a cylindrical tube. Germen inversely egg-shaped, furrowed. Style cylindrical, longer than the stamens. Stigmas two, revolute. Seed inversely egg-shaped, furrowed: seed-down in hair-like rays, on a long cylindrical stalk. Receptacle naked, convex, dotted.

L. Taráxacum. Common Dandelion. Outer scales of the calyx loose and reflected; leaves runcinate, smooth.——Flowers large, yellow, a single one on each tubular stalk. Bitter, but not disagreeably so. Perennial: flowers from March to August: grows in pastures, on banks, and by roads and walls; common. *Engl. Bot.* vol. viii. pl. 510. *Engl. Fl.* vol. iii. p. 349.

L. palústre. Marsh Dandelion. Outer scales of the calyx close-pressed and erect; leaves lance-shaped, between sinuate and toothed, nearly smooth.——Much smaller than the last, and perfectly distinct from it, its characters being permanent in every variety of situation. Perennial: flowers in May and June: grows generally in marshy places, sometimes in dry pastures. In many districts of Scotland, and especially in the Hebrides, it is much more common than the other species. *Engl. Bot.* vol. viii. pl. 553. *Engl. Fl.* vol. iii. p. 350.

7. APA'RGIA.

Common calyx double; the inner oblong, imbricated, of several linear, parallel, unequal scales; the outer very small, of irregularly scattered scales. Compound corolla of numerous, imbricated, uniform, perfect, strap-shaped, abrupt, five-toothed florets. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen oblong. Style thread-shaped, longer than the anthers. Stigmas two, recurved. Seed oblong, striated: seed-down sessile, feathery, often scaly in the marginal seeds, sometimes a little stalked in the central ones. Receptacle naked, or slightly hairy, dotted.

A. hispida. Rough Hawkbit. Stalks leafless, one-flowered; leaves runcinate, rough; florets hairy at their orifice, glandular at the end; seeds all with feathery down.——Root tapering, long: leaves hairy on both sides: stalks simple, round, rough: flowers bright yellow. Perennial: flowers in July: grows in pastures; common. *Engl. Bot.* vol. viii. pl. 554. *Engl. Fl.* vol. iii. p. 351.

A. hírta. Deficient Hawkbit. Stalks leafless, one-flowered; leaves toothed, rough; calyx nearly smooth; outer row of seeds crowned with scales.——Root abrupt: flowers yellow. Perennial: flowers in July and August: grows in gravelly pastures and on moors; common. *Engl. Bot.* vol. viii. pl. 554. *Engl. Fl.* vol. iii. p. 352.

A. Taráxaci. Dandelion Hawkbit. Stalks generally one-flowered, leafless, swelled and hairy at the top; calyx hairy.——Leaves from the root, smooth, spatulate or linear, toothed: corolla bright yellow: down uniform, sessile. Perennial: flowers in July and August: grows on the higher mountains of Scotland and Wales. *Engl. Bot.* vol. xvi. pl. 1109: *Hedypnois Taraxaci. Engl. Fl.* vol. iii. p. 352.

A. autumnális. Autumnal Hawkbit. Flower-stalk branched, the partial stalks scaly, and swelled under the flowers; leaves lance-shaped, toothed, or pinnatifid, nearly smooth.——Root large, tapering: stalks from six inches to two feet high: leaves covered with scattered white hairs: flowers large, yellow. Perennial: flowers in July and August: grows in pastures and meadows, by waysides and on banks; common. *Engl. Bot.* vol. xii. pl. 830: *Hedypnois autumnalis. Engl. Fl.* vol. iii. p. 353.

8. HIERA'CIUM.

Common calyx egg-shaped, imbricated, of numerous linear, very unequal scales. Compound corolla of numerous, imbricated, uniform, perfect, strap-shaped, abrupt, five-toothed florets. Filaments hair-like, very short. Anthers united into a cylindrical tube, much shorter than the floret. Germen nearly egg-shaped. Style thread-shaped, as long as the stamens. Stigmas two, reflected. Seed egg-shaped or oblong, angular: seed-down sessile, hair-like, uniform. Receptacle convex, naked or nearly so, dotted.

* *Stalk from the root, leafless, or nearly so, single-flowered.*

H. alpínum. Alpine Single-flowered Hawkweed. Stalk leafless, hairy, one-flowered; leaves oblong, undivided, somewhat toothed: calyx hairy.——Plant covered with long whitish hairs: stalk about six inches high: flower large, bright yellow. Perennial: flowers in July: grows on the higher mountains of Scotland and Wales. *Engl. Bot.* vol. xvi. pl. 1110. *Engl. Fl.* vol. iii. p. 355.

H. Hallèri. Hallerian Hawkweed. Stalk erect, solid, one-flowered, slightly leafy; leaves hairy; the lower oblong, toothed, stalked; the upper lance-shaped; calyx hairy.——Stem rough with short bristles, generally one, sometimes two-flowered. Resembles *H. alpinum.* Perennial: flowers in August: found on the Clova Mountains and Ben Lawers, by Mr. G. Don; on Ben-vor, near Killin, by Dr. Hooker and Mr. Turner. *Engl. Fl.* vol. iv. p. 271. *Brit. Fl.* p. 342.

H. Pilosélla. Mouse-ear Hawkweed. Stalk leafless, one-flowered; leaves between elliptical and lance-shaped, entire, white and downy beneath; scions creeping.——Readily distinguished by its scions and pale yellow flowers. Perennial: flowers in June and July: grows in dry pastures; common. *Engl. Bot.* vol. xvi. pl. 1093. *Engl. Fl.* vol. iii. p. 356.

** *Stalk from the root, leafless, many-flowered.*

H. dúbium. Branching Mouse-ear Hawkweed. Leaves between elliptical and lance-shaped, obtuse, sprinkled with coarse hairs, somewhat glaucous beneath; scions creeping, lengthened; stalk nearly smooth, loosely corymbose; calyx bristly.——Stalk about a foot high, bearing three or four pale yellow flowers. Perennial: flowers in July: grows in mountainous pastures. *Engl. Bot.* vol. xxxiii. pl. 2352. *Engl. Fl.* vol. iii. p. 357.

H. aurantíacum. Orange Hawkweed. Leaves elliptical, acute, entire; stalk, often bearing one or two leaves at the bottom, hairy, corymbose, many-flowered; calyx covered with long hairs.——Stalk about a foot high, with several deep orange-coloured flowers: leaves rough with short hairs. Perennial: flowers in June and July: grows in woods. *Engl. Bot.* vol. xxi. pl. 1469. *Engl. Fl.* vol. iii. p. 358.

*** *Stem leafy.*

H. murórum. Broad-leaved Wall Hawkweed. Stem corymbose, with a single leaf; leaves between egg-shaped and heart-shaped, waved, toothed at the base.——Leaves hairy, often purplish at the back: stems erect, from twelve to eighteen inches high, round, hairy, bearing four or five large yellow flowers: flower-stalks and calyx rough with black glandular hairs. Perennial: flowers in June: grows on rocks, debris, and old walls; common. *Engl. Bot.* vol. xxix. pl. 2082. *Engl. Fl.* vol. iii. p. 359.

H. maculátum. Spotted Hawkweed. Stem cymose, many-leaved, hollow; leaves between egg-shaped and lance-shaped, strongly toothed, the teeth directed forwards.——Stem from one to three feet high, hairy: leaves more or less speckled with dark purple, pale beneath: flower-stalks and calyx covered with whitish cottony or mealy down, mixed with black glandular hairs: flowers bright yellow. Perennial: flowers from June to September: grows on the mountains of Scotland, Westmoreland, and Wales. *Engl. Bot.* vol. xxx. pl. 2121. *Engl. Fl.* vol. iii. p. 360.

H. sylváticum. Wood Hawkweed. Stem racemose, many-leaved, solid; leaves between egg-shaped and lance-shaped, toothed, chiefly at the base, the teeth directed forwards.——Stem twelve or eighteen inches high, erect, striated, panicled above: root-leaves on long hairy stalks, upper stem-leaves nearly sessile: flower-stalks and calyx rough, with short black hairs: flowers bright yellow. Perennial: flowers in June and July: grows in woods, and on dry banks and old walls. *Engl. Bot.* vol. xxix. pl. 2031.

H. pulmonárium. Lungwort Hawkweed. Stem somewhat corymbose, slightly leafy, solid; leaves lance-shaped, deeply and unequally toothed, the teeth directed forwards.——Stem about a foot high, round, striated: panicle of from two to six flowers, their stalks and calyx rough with

black glandular hairs. Perennial: flowers in July: grows on rocks about rivers in Scotland: found by Mr. Borrer in Glen-Nevis; Don Braes near Aberdeen. *Engl. Bot.* vol. xxxiii. pl. 2307. *Engl. Fl.* vol. iii. p. 362.

H. Lawsóni. Glaucous Hairy Hawkweed. Stem more or less branched, solid, slightly leafy; root-leaves stalked, between egg-shaped and lance-shaped, glaucous, fringed, slightly toothed.——Stems about a foot high, round, smooth: flower-stalks bristly and downy: flowers three or four, bright yellow. Perennial: flowers in July: grows on rocks. *Engl. Bot.* vol. xxix. pl. 2083. *Engl. Fl.* vol. iii. p. 362.

H. paludósum. Succory-leaved Hawkweed. Stem corymbose, angular, hollow, leafy, smooth; leaves smooth, toothed, embracing the stem with their heart-shaped base; calyx hairy.——Stem erect, from one to two feet high: flower-stalks smooth: calyx covered with black hairs: flowers bright yellow. Perennial: flowers in July: grows by the sides of rivers. *Engl. Bot.* vol. xvi. pl. 1094. *Engl. Fl.* vol. iii. p. 232.

H. mólle. Soft-leaved Hawkweed. Stem corymbose, angular, hollow, leafy, downy; leaves lance-shaped, slightly toothed, hairy, clasping the stem; the lower ones stalked, very obtuse.——Stem twelve or eighteen inches high, erect, hairy: flowers golden yellow. Perennial: flowers in July and August: grows in woods in Scotland. *Engl. Bot.* vol. xxxi. pl. 2210. *Engl. Fl.* vol. iii. p. 364.

H. cerinthoides. Honey-wort-leaved Hawkweed. Stem corymbose, hairy, somewhat angular, leafy, solid; leaves hairy, slightly toothed, the upper egg-shaped, embracing the stem, the lower between oblong and inversely egg-shaped, with fringed stalks.——Stem nearly two feet high, erect, angular, smooth: flower-stalks covered with glandular bristles: calyx hairy: flowers bright yellow. Perennial: flowers in August: grows on rocks in the Highlands of Scotland. *Engl. Bot.* vol. xxxiv. pl. 2378. *Eng. Fl.* vol. iii. p. 365.

H. subaudum. Shrubby Broad-leaved Hawkweed. Stem panicled many-flowered, with numerous broadly lance-shaped, acutely-toothed, rough-edged, somewhat embracing leaves, hairy beneath.——Stems two or three feet high, erect, furrowed: flowers numerous, golden-yellow. Perennial: flowers in August and September: grows in woods and thickets. *Engl. Bot.* vol. v. pl. 349. *Engl. Fl.* vol. iii. p. 367.

H. prenanthoides. Rough-bordered Hawkweed. Stem erect, solid, leafy, many-flowered, corymbose; leaves somewhat toothed, embracing the stem, rough near the edge, glaucous beneath, the upper ones heart-shaped.——Stem from two to three feet high: flowers bright yellow, in a corymbose panicle: their stalks and calyx rough with glandular hairs. Perennial: flowers in August: grows in woods and thickets in the south of Scotland. *Engl. Bot.* vol. xxxii. pl. 2235. *Engl. Fl.* vol. iii. p. 388.

H. denticulátum. Small-toothed Hawkweed. Stem erect, solid, leafy, many-flowered, cymose; leaves sessile, lance-shaped, inclining to elliptical, minutely toothed, smoothish, glaucous beneath.——Stem about three feet high: flowers bright yellow, in a cymose panicle: stalks and calyx downy and glandular. *Engl. Bot.* vol. xxx. pl. 2122. *Engl. Fl.* vol. iii. p. 368.

H. umbellátum. Narrow-leaved Hawkweed. Stem erect, nearly solid, leafy, imperfectly umbellate; leaves numerous, scattered, between linear and lance-shaped, slightly toothed, nearly smooth; flower-stalks downy; calyx smooth.——Stem two or three feet high, slightly hairy: flowers bright yellow. *Engl. Bot.* vol. xxv. pl. 1171. *Engl. Fl.* vol. iii. p. 233.

9. CRE'PIS.

Common calyx double; the outer very short, loose, swelled, deciduous; the inner egg-shaped, simple, furrowed, permanent, of several linear parallel scales. Compound corolla of numerous, imbricated, uniform, perfect, strap-shaped, abrupt, five-toothed florets. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen nearly egg-shaped. Style thread-shaped, as long as the stamens. Stigmas two, reflected. Seeds oblong: seed-down hair-like, stalked or sessile. Receptacle slightly scaly.

C. fœ'tida. Stinking Hawk's-beard. Leaves hairy, pinnatifid; their stalks toothed: stem hairy; calyx downy.——Stems a foot high, spreading, the central one erect; flowers several, solitary, pale-yellow. The leaves smell like bitter almonds. Biennial: flowers in June and July: grows in dry meadows and pastures. *Engl. Bot.* vol. vi. pl. 406. *Engl. Fl.* vol. iii. p. 370.

C. púlchra. Small-flowered Hawk's-beard. Leaves downy, toothed; those from the root inversely egg-shaped, the rest somewhat arrow-shaped, clasping; panicle corymbose, spreading; calyx smooth.—— Stem from one to two feet high, erect, furrowed: flowers erect, small, yellow. Annual: flowers from June to September: grows among debris of rocks; found by Mr. G. Don, on the hill of Turin, near Forfar. *Engl. Bot.* vol. xxxiii. pl. 2325. *Eng. Fl.* vol. iii. p. 371.

C. tectorum. Smooth Hawk's-beard. Root leaves runcinate; stem-leaves lance-shaped, toothed, embracing; stem smooth: calyx rough; seed-down sessile.——Stem from one to two feet high; leaves smooth; panicle slender, corymbose: flowers small, bright yellow. Annual: flowers from June to October: grows in dry pastures and waste ground, on walls and roofs; common. *Engl. Bot.* vol. xvi. pl. 1111. *Engl. Fl.* vol. iii. p. 372.

C. biénnis. Rough Hawk's-beard. Lower leaves runcinate; stem-leaves pinnatifid, clasping; all rough with bristly hairs; calyx somewhat bristly.——Stem three or four feet high, erect, corymbose: flowers pale yellow. Biennial: flowers in June and July: grows in dry pastures in the south of England. *Engl. Bot.* vol. iii. pl. 149. *Engl. Fl.* vol. iii. p. 373.

10. HYPOCHÆ'RIS.

Common calyx egg-shaped, imbricated, with lance-shaped, acute scales, the outer gradually smaller, all permanent. Compound corolla of numerous, imbricated, uniform, perfect, strap-shaped, abrupt, five-toothed florets. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen inversely egg-shaped. Style thread-shaped, longer than the anthers. Stigmas recurved. Seed oblong,

acute, furrowed, rough: seed-down feathery, stalked. Receptacle chaffy, with slender, acute scales, as long as the seeds.

H. maculáta. Spotted Cat's-ear. Stem nearly leafless, commonly simple, leaves oblong, inclining to egg-shaped, undivided, toothed. ——Stem generally leafless, sometimes with one or two lance-shaped leaves: root-leaves rough, blotched with brown: flowers large, yellow. Perennial: flowers in July: grows in dry pastures and woods. *Engl. Bot.* vol. iv. pl. 225. *Engl. Fl.* vol. iii. pl. 374.

H. gla'bra. Smooth Cat's-ear. Stems branched, somewhat leafy, smooth; leaves toothed or sinuated, smooth.——Stems a foot or more high: leaves oblong, hairy: flowers small, bright yellow: down of the central florets only stalked. Annual: flowers from June to September: grows in gravelly pastures; rare. *Engl. Bot.* vol. viii. pl. 575. *Engl. Fl.* vol. iii. p. 375.

H. radicáta. Long-rooted Cat's-ear. Stems branched, leafless, smooth; leaves runcinate, obtuse, rough; flower-stalks scaly; down of all the seeds stalked.——Root long and tapering: stems about a foot high, spreading, with a small scale under each branch, and a number of awl-shaped bracteas on the hollow, enlarged flower-stalks: flowers large, bright yellow. Perennial: flowers in July and August: grows in pastures and waste ground; common. *Engl. Bot.* vol. xii. pl. 831. *Eng Fl.* vol. iii. p. 376.

11. LAPSA'NA.

Common calyx double, egg-shaped; the outer of a few small egg-shaped or linear, scattered, close scales; the inner of about eight, linear, channelled, keeled, acute, nearly equal scales. Compound corolla of about sixteen imbricated, uniform, perfect, strap-shaped, abrupt, five-toothed florets. Filaments hair-like, very short. Anthers united in a cylindrical tube. Germen inversely egg-shaped, small. Style thread-shaped, as long as the stamens. Stigmas spreading. Seed oblong, angular, furrowed, smooth. Seed-down none. Receptacle naked, flat, narrow.

L. commúnis. Common Nipple-wort. Calyx of the fruit angular; stem panicled; flower-stalks thread-like; leaves egg-shaped, stalked, angularly toothed.——Stem from one to three feet high, much branched; leaves generally approaching to lyrate, with the terminal lobe very large, downy: flowers small, yellow. Annual: flowers in July and August: grows in waste places and cultivated ground; common. *Engl. Bot.* vol. xii. pl. 844. *Engl. Fl.* vol. iii. p. 377.

L. pusílla. Dwarf Nipple-wort. Scape branched, swelled and hollow at the top; leaves inversely egg-shaped, smooth, rough-edged. Stalks six or eight inches high: flowers small, bright yellow. Annual: flowers in June: grows in gravelly fields. *Engl. Bot.* vol. ii. pl. 95: *Hyoseris minima. Engl. Fl.* vol. iii. p. 377.

12. CICHO'RIUM.

Common calyx double, cylindrical; the outer of a few oblong,

shortish scales; the inner of about eight linear, equal, permanent scales. Compound corolla of about twenty strap-shaped, abrupt, deeply five-toothed, perfect florets. Filaments hair-like, very short. Anthers united into a five-cornered tube. Germen egg-shaped. Style thread-shaped, as long as the stamens. Stigmas revolute. Seed obscurely five-sided, abrupt; seed-down of several chaffy, erect bristles, shorter than the seed. Receptacle somewhat chaffy.

C. Intybus. Wild Succory. Flowers in pairs, sessile; leaves runcinate.——Stem two or three feet high, round, rough, branched: flowers large, bright blue, axillar: the roots are eatable, and have also been used as a substitute for coffee. Perennial: flowers in July and August: grows in borders of fields and by roads. *Engl. Bot.* vol. viii. pl. 539. *Engl. Fl.* vol. iii. p. 379.

13. A'RCTIUM.

Common calyx globular, imbricated, of numerous lance-shaped scales, ending in awl-shaped, hooked, thorny points, permanent. Compound corolla of numerous, perfect, equal florets, with a very long slender tube, and a wider egg-shaped limb, divided into five linear, regular, spreading segments. Filaments hair-like, very short. Anthers forming a cylindrical, five-toothed tube, as long as the corolla. Germen oblong, downy at the summit. Style thread-shaped, longer than the stamens. Stigmas reflected. Seed inversely pyramidal, with four unequal obtuse angles; seed-down simple, rough, shorter than the seed. Receptacle flat, covered with linear chaffy scales, nearly as long as the calyx.

A. Lappa. Burdock. Clot-bur. Leaves heart-shaped, stalked.——Stem about three feet high, branched, furrowed: leaves hoary beneath; flowers axillar, purple. Biennial: flowers in July and August: grows in pastures and waste ground; common. The calyx is at first more or less covered with a substance resembling cobwebs, which afterwards, especially in rainy weather, disappears. When it is smooth, the plant has been named *A. Lappa*, when downy, *A. Bardana. Engl. Bot.* vol. xviii. pl. 1228. and vol. xxxv. pl. 2478. *Engl. Fl.* vol. iii. p. 380, 381.

14. SERRATULA.

Common calyx oblong, nearly cylindrical, imbricated, of numerous lance-shaped scales, permanent. Compound corolla uniform, of numerous, perfect, equal, funnel-shaped florets, their limb divided into five equal segments. Filaments hair-like, very short. Anthers united into a cylindrical tube, as long as the corolla. Germen inversely egg-shaped. Style thread-shaped, as long as the stamens. Stigmas oblong, reflected. Seed inversely egg-shaped, somewhat angular; seed-down sessile, rough or feathery, permanent. Receptacle chaffy, or hairy, flat.

S. tinctória. Common Saw-wort. Leaves pinnatifid, somewhat lyre-shaped, with bristly serratures; seed-down roughish.——Stem two or

three feet high, erect, stiff, branched at the top: flowers purple. Is used for dying cloth yellow. Perennial: flowers in July and August: grows in woods, thickets, and pastures. *Engl. Bot.* vol. i. pl. 38. *Engl. Fl.* vol. iii. p. 382.

S. alpina. Alpine Saw-wort. Leaves undivided, broadly lance-shaped, toothed, cottony beneath: calyx hairy; seed-down feathery. ——Stems nearly a foot high, erect, unbranched, woolly: flowers purple, large. Perennial: flowers in July and August: grows on the sides of mountains in Scotland and Wales. *Engl. Bot.* vol. ix. pl. 599. *Engl. Fl.* vol. iii. p. 383.

15. CARDUUS.

Common calyx swelled, imbricated, of numerous, lance-shaped, thorn-pointed scales, permanent. Compound corolla uniform, of very numerous, perfect, equal, tubular florets, with a slender recurved tube, the limb egg-shaped at the base, with five linear segments, one of which is a little distant from the rest. Filaments hair-like, very short. Anthers united into a five-toothed cylindrical tube, about the same length as the corolla. Germen inversely heart-shaped. Style thread-shaped, longer than the corolla. Stigma undivided or cleft, oblong. Seed inversely egg-shaped, unequally four-cornered, with a slender cylindrical point; seed-down sessile, hair-like, rough, very long. Receptacle flat, hairy.

* *Leaves decurrent.*

C. nútans. Musk Thistle. Leaves interruptedly decurrent; flowers solitary, drooping; scales of the calyx lance-shaped, cottony, their upper part spreading.——Stem two or three feet high, erect, branched: flower-stalks terminal, downy: flowers drooping, large, purple, emitting a musky odour. Annual: flowers in July and August: grows in dry pastures, waste grounds, and by roads. *Engl. Bot.* vol. xvi. pl. 1112. *Engl. Fl.* vol. iii. p. 384.

C. acanthóides. Welted Thistle. Leaves decurrent, sinuated, very thorny; flowers several together, shortly stalked, calyx globular, with linear, partly recurved scales.——Stem about three feet high, much branched: flowers purplish-crimson. Annual: flowers in June and July: grows in waste ground, and by roads and hedges. *Engl. Bot.* vol. xiv. pl. 973. *Engl. Fl.* vol. iii. p. 385.

C. tenuiflórus. Slender-flowered Thistle. Leaves decurrent, sinuated, thorny; flowers several together, sessile; calyx somewhat cylindrical, its scales lance-shaped, a little recurved at the point.——Stem from two to four feet high, erect; leaves cottony beneath; flowers numerous, pale purplish. Annual: flowers in July and August: grows in waste places, about towns; very abundant about Edinburgh. *Engl. Bot.* vol. vi. pl. 412. *Engl. Fl.* vol. iii. p. 385.

** *Leaves not decurrent.*

C. mariánus. Milk Thistle. Leaves waved, thorny, embracing the stem, the root-leaves pinnatifid; scales of the calyx resembling leaves, recurved, channelled, thorny at the edges.——Stem four or five feet high, branched: leaves dark green, their veins bordered with white:

flowers large, solitary, purple. Annual: flowers in June and July: grows in waste ground about towns. *Engl. Bot.* vol. xiv. pl. 976. *Engl. Fl.* vol. iii. p. 386.

16. CNI'CUS.

Common calyx swelled, imbricated, of numerous lance-shaped, thorn-pointed scales, permanent. Compound corolla nearly uniform, equal, tubular, funnel-shaped florets, with a slender, recurved tube, the limb egg-shaped at the base, with five linear segments. Filaments hair-like, very short. Anthers united into a five-toothed cylindrical tube, nearly as long as the corolla. Stigma undivided, or cleft, oblong. Seed inversely egg-shaped, with a slender, cylindrical point; seed-down sessile, feathery, very long. Receptacle flat, covered with bristles as long as the tubes of the florets.

* *Leaves decurrent.*

C. lanceolátus. Spear Thistle. Leaves decurrent, bristly, pinnatifid, their segments generally three-lobed, spreading in different directions, thorny; calyx egg-shaped, woolly, with lance-shaped thorn-pointed scales, spreading above.——Stem branched, stout, from one to three feet high: leaves woolly beneath, with a very long and very sharp point: flowers large, purple, single or in pairs. Biennial: flowers in July and August: grows by road-sides, and in waste places, dry pastures and neglected fields. *Engl. Bot.* vol. ii. pl. 107: *Carduus lanceolatus. Engl. Fl.* vol. iii. p. 388.

C. palústris. Marsh Thistle. Leaves decurrent, bristly, pinnatifid, thorny; calyx egg-shaped, with broadly lance-shaped, minutely thorn-pointed, closely-pressed scales; flowers several together.——Stem from three to five feet high, erect, rather slender, covered with short weak thorns: leaves woolly beneath: scales of the calyx purple, keeled near the end with a soft shining substance: flowers purple. Biennial: flowers in July: grows in moist meadows, by ditches and pools. *Engl. Bot.* vol. xiv. pl. 974: *Carduus palústris. Engl. Fl.* vol. iii. p. 388.

** *Leaves not decurrent.*

C. arvénsis. Field Thistle. Leaves sessile, pinnatifid, thorny; stem panicled; calyx egg-shaped, with closely pressed, minutely thorn-pointed scales.——Stem from two to four feet high, round, smooth, angular: leaves bare beneath: flower-stalks cottony: flowers pale purple. Perennial: flowers in July: grows in corn-fields, pastures, and waste places; common. *Engl. Bot.* vol. xiv. pl. 975.

C. erióphorus. Woolly-headed Thistle. Leaves pinnatifid, with thorny segments pointing two ways, bristly above; calyx globular, densely woolly, with minutely thorn-pointed scales.——Stem three feet high, furrowed, slightly hairy: flowers numerous, very large, purple. Biennial: flowers in August: grows by roads and in dry pastures; not common. *Engl. Bot.* vol. vi. pl. 386. *Engl. Fl.* vol. iii. p. 390.

C. tuberósus. Tuberous Thistle. Leaves deeply pinnatifid, lobed, fringed with prickles, the lower ones stalked; stem smooth, almost

three feet high, erect, stiff, branched at the top: flowers purple. Is used for dying cloth yellow. Perennial: flowers in July and August: grows in woods, thickets, and pastures. *Engl. Bot.* vol. i. pl. 38. *Engl. Fl.* vol. iii. p. 382.

S. alpina. Alpine Saw-wort. Leaves undivided, broadly lance-shaped, toothed, cottony beneath: calyx hairy; seed-down feathery. ——Stems nearly a foot high, erect, unbranched, woolly: flowers purple, large. Perennial: flowers in July and August: grows on the sides of mountains in Scotland and Wales. *Engl. Bot.* vol. ix. pl. 599. *Engl. Fl.* vol. iii. p. 383.

15. CARDUUS.

Common calyx swelled, imbricated, of numerous, lance-shaped, thorn-pointed scales, permanent. Compound corolla uniform, of very numerous, perfect, equal, tubular florets, with a slender recurved tube, the limb egg-shaped at the base, with five linear segments, one of which is a little distant from the rest. Filaments hair-like, very short. Anthers united into a five-toothed cylindrical tube, about the same length as the corolla. Germen inversely heart-shaped. Style thread-shaped, longer than the corolla. Stigma undivided or cleft, oblong. Seed inversely egg-shaped, unequally four-cornered, with a slender cylindrical point; seed-down sessile, hair-like, rough, very long. Receptacle flat, hairy.

* *Leaves decurrent.*

C. nútans. Musk Thistle. Leaves interruptedly decurrent; flowers solitary, drooping; scales of the calyx lance-shaped, cottony, their upper part spreading.——Stem two or three feet high, erect, branched: flower-stalks terminal, downy: flowers drooping, large, purple, emitting a musky odour. Annual: flowers in July and August: grows in dry pastures, waste grounds, and by roads. *Engl. Bot.* vol. xvi. pl. 1112. *Engl. Fl.* vol. iii. p. 384.

C. acanthóides. Welted Thistle. Leaves decurrent, sinuated, very thorny; flowers several together, shortly stalked, calyx globular, with linear, partly recurved scales.——Stem about three feet high, much branched: flowers purplish-crimson. Annual: flowers in June and July: grows in waste ground, and by roads and hedges. *Engl. Bot.* vol. xiv. pl. 973. *Engl. Fl.* vol. iii. p. 385.

C. tenuiflórus. Slender-flowered Thistle. Leaves decurrent, sinuated, thorny; flowers several together, sessile; calyx somewhat cylindrical, its scales lance-shaped, a little recurved at the point.——Stem from two to four feet high, erect; leaves cottony beneath; flowers numerous, pale purplish. Annual: flowers in July and August: grows in waste places, about towns; very abundant about Edinburgh. *Engl. Bot.* vol. vi. pl. 412. *Engl. Fl.* vol. iii. p. 385.

** *Leaves not decurrent.*

C. marianus. Milk Thistle. Leaves waved, thorny, embracing the stem, the root-leaves pinnatifid; scales of the calyx resembling leaves, recurved, channelled, thorny at the edges.——Stem four or five feet high, branched: leaves dark green, their veins bordered with white:

flowers large, solitary, purple. Annual: flowers in June and July: grows in waste ground about towns. *Engl. Bot.* vol. xiv. pl. 976. *Engl. Fl.* vol. iii. p. 386.

16. CNI'CUS.

Common calyx swelled, imbricated, of numerous lance-shaped, thorn-pointed scales, permanent. Compound corolla nearly uniform, equal, tubular, funnel-shaped florets, with a slender, recurved tube, the limb egg-shaped at the base, with five linear segments. Filaments hair-like, very short. Anthers united into a five-toothed cylindrical tube, nearly as long as the corolla. Stigma undivided, or cleft, oblong. Seed inversely egg-shaped, with a slender, cylindrical point; seed-down sessile, feathery, very long. Receptacle flat, covered with bristles as long as the tubes of the florets.

* *Leaves decurrent.*

C. lanceolátus. Spear Thistle. Leaves decurrent, bristly, pinnatifid, their segments generally three-lobed, spreading in different directions, thorny; calyx egg-shaped, woolly, with lance-shaped thorn-pointed scales, spreading above.——Stem branched, stout, from one to three feet high: leaves woolly beneath, with a very long and very sharp point: flowers large, purple, single or in pairs. Biennial: flowers in July and August: grows by road-sides, and in waste places, dry pastures and neglected fields. *Engl. Bot.* vol. ii. pl. 107: *Carduus lanceolatus. Engl. Fl.* vol. iii. p. 388.

C. palústris. Marsh Thistle. Leaves decurrent, bristly, pinnatifid, thorny; calyx egg-shaped, with broadly lance-shaped, minutely thorn-pointed, closely-pressed scales; flowers several together.——Stem from three to five feet high, erect, rather slender, covered with short weak thorns: leaves woolly beneath: scales of the calyx purple, keeled near the end with a soft shining substance: flowers purple. Biennial: flowers in July: grows in moist meadows, by ditches and pools. *Engl. Bot.* vol. xiv. pl. 974: *Carduus palústris. Engl. Fl.* vol. iii. p. 388.

** *Leaves not decurrent.*

C. arvénsis. Field Thistle. Leaves sessile, pinnatifid, thorny; stem panicled; calyx egg-shaped, with closely pressed, minutely thorn-pointed scales.——Stem from two to four feet high, round, smooth, angular: leaves bare beneath: flower-stalks cottony: flowers pale purple. Perennial: flowers in July: grows in corn-fields, pastures, and waste places; common. *Engl. Bot.* vol. xiv. pl. 975.

C. erióphorus. Woolly-headed Thistle. Leaves pinnatifid, with thorny segments pointing two ways, bristly above; calyx globular, densely woolly, with minutely thorn-pointed scales. ——Stem three feet high, furrowed, slightly hairy: flowers numerous, very large, purple. Biennial: flowers in August: grows by roads and in dry pastures; not common. *Engl. Bot.* vol. vi. pl. 386. *Engl. Fl.* vol. iii. p. 390.

C. tuberósus. Tuberous Thistle. Leaves deeply pinnatifid, lobed, fringed with prickles, the lower ones stalked; stem smooth, almost

one-flowered; scales of the calyx minutely thorn-pointed, nearly smooth; root creeping, tuberous.——Stem two feet high, erect, straight, furrowed, hairy: flower erect, bright purple. Perennial: flowers in August. Found by Mr. Lambert in a thicket on the Wiltshire downs. *Engl. Bot.* vol. xxxvi. pl. 2562. *Engl. Fl.* vol. iii. p. 391.

C. heterophyllus. Melancholy Thistle. Leaves embracing the stem, lance-shaped, fringed, undivided or pinnatifid, smooth on their upper side, densely cottony beneath; stem downy, almost one-flowered.——Stem three feet high, erect, hollow, cottony, bearing a single large, purple flower. Perennial: flowers in July and August: grows in moist pastures in Scotland, Wales, and the north of England; rare. *Engl. Bot.* vol. x. pl. 675: *Carduus heterophyllus. Engl. Fl.* vol. iii. p. 392.

C. praténsis. Meadow Thistle. Leaves sessile, lance-shaped, waved, fringed with unequal thorns, cottony beneath; stem downy, one-flowered; calyx cottony, its scales lance-shaped.——Stem about a foot high, furrowed, bearing a single pale purple flower. Perennial: flowers in June and July: grows in moist pastures. *Engl. Bot.* vol. iii. pl. 177: *Carduus pratensis. Engl. Fl.* vol. iii. p. 393.

C. acáulis. Dwarf Thistle. Scape one-flowered, shorter than the smooth calyx.——Leaves oblong, pinnatifid, spreading close to the ground: flower almost sessile, large, purple. Perennial: flowers in July: grows in dry pastures. *Engl. Bot.* vol. iii. pl. 161. *Engl. Fl.* vol. iii. p. 394.

17. ONOPO'RDUM.

Common calyx roundish, tumid, imbricated, of numerous, lance-shaped, thorn-pointed scales, permanent. Compound corolla uniform, with very numerous, equal, funnel-shaped corollas; their tube very slender; the limb deeply divided into five linear, equal segments. Filaments hair-like, very short. Anthers united into a five-toothed cylindrical tube. Germen inversely egg-shaped, short. Style thread-shaped, longer than the stamens. Stigma oblong, notched. Seed inversely egg-shaped, pointed, smooth; seed-down hair-like, sessile, rough, deciduous. Receptacle convex, fleshy, deeply cellular, somewhat chaffy.

O. Acánthium. Common Cotton-thistle. Scales of the calyx awl-shaped, spreading in every direction; leaves oblong, inclining to egg-shaped, sinuated, woolly on both sides.——Stem four or five feet high, branched, woolly: flowers large, purple. Biennial: flowers in July and August: grows in waste ground, and by roads and hedges. *Engl. Bot.* vol. xiv. pl. 977. *Engl. Fl.* vol. iii. p. 395.

18. CARLI'NA.

Common calyx cylindrical, somewhat swelled, imbricated, of numerous, loose, acute, permanent scales, the innermost much longer, linear, coloured, spreading horizontally; the outer thorn-pointed. Compound corolla uniform, flat, with numerous, equal, funnel-shaped florets; their limb deeply divided into five erect segments. Filaments hair-like, very short. Anthers united into a cylindrical tube, each with two

deflected bristles at the base. Germen inversely egg-shaped. Style thread-shaped, as long as the anthers. Stigma oblong. Seed conical, abrupt, roughish; seed-down partly chaffy, partly feathery, permanent. Receptacle flat, covered with linear, chaffy scales, many-cleft at the top.

C. vulgáris. Common Carline Thistle. Stem corymbose, many-flowered; flowers terminal; outer scales of the calyx pinnatifid.—Stem about a foot high, erect, downy: leaves lance-shaped, sinuated, bordered with prickles: flowers red. The flowers, which expand in dry weather, and close before rain, retain this property after they are dried, and are used as hygrometers. Biennial: flowers in June: grows in dry sandy pastures and fields. *Engl. Bot.* vol. xvi. pl. 1144.. *Engl. Fl.* vol. iii. p. 397.

19. BI'DENS.

Common calyx erect, of several oblong, nearly equal, parallel scales, concave or channelled on the back. Compound corolla level at the top, of several parallel, perfect, tubular, equal florets; their limb egg-shaped, with five marginal, spreading segments. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen oblong, compressed, with bristly erect points on its outside. Style thread-shaped, as long as the stamens. Stigmas oblong, reflected. Seed angular, abrupt, beaked with two or more bristles, which are rough with deflected prickles. Receptacle flat, covered with erect, chaffy, oblong, deciduous scales.

B. cérnua. Nodding Bur-marigold. Leaves lance-shaped, serrate; flowers drooping; bracteas lance-shaped, nearly equal; bristles of the seed about four, erect.—Stem erect, two or three feet high: flowers large, yellow. Annual: flowers in September: grows by the sides of ditches and ponds. *Engl. Bot.* vol. xvi. pl. 1114. *Engl. Fl.* vol. iii. p. 399.

B. tripartíta. Three-cleft Bur-marigold. Leaves divided into three segments; bracteas lance-shaped, unequal; bristles of the seeds two or three, erect.—Stem two or three feet high: flowers brownish-yellow. Annual: flowers in August and September: grows about the sides of ditches and ponds. *Engl. Bot.* vol. xvi. pl. 1113. *Engl. Fl.* vol. iii. p. 398.

20. EUPATO'RIUM.

Common calyx oblong, imbricated, with lance-shaped, unequal, erect, thornless scales. Compound corolla uniform, level, of a few perfect, regular, funnel-shaped florets. Filaments hair-like, very short. Anthers united, with a cylindrical tube, as long as the corolla. Germen small, oblong, angular. Style thread-shaped, very long, cleft as far down as the anthers. Stigmas oblong, downy, spreading. Seed oblong, angular: seed-down sessile, rough or feathery, permanent. Receptacle naked, small.

E. cannabinum. Hemp Agrimony. Leaves divided into three or five lance-shaped segments, the middle one longest.——Stems two or three feet high, erect, branched, downy: flowers reddish-purple, in terminal tufts. Perennial: flowers in July and August: grows about the banks of rivers and lakes; not common. *Engl. Bot.* vol. vi. pl. 428. *Engl. Fl.* vol. iii. p. 400.

21. CHRYSO'COMA.

Common calyx hemispherical, imbricated, of numerous, narrow, lance-shaped, pointed, thornless scales. Compound corolla uniform, of several tubular, perfect, regular florets. Filaments hair-like, very short. Anthers united into a cylindrical, five-pointed tube, shorter than the corolla. Germen oblong. Style thread-shaped, as long as the corolla. Stigmas oblong, spreading. Seed inversely egg-shaped, compressed; seed-down sessile, rough, permanent. Receptacle flat, slightly cellular, naked.

Ch. Linosy'ris. Flax-leaved Goldilocks. Herbaceous; leaves linear, smooth; scales of the calyx spreading.——Stems a foot high, erect, stiff, unbranched: flowers bright yellow, in a corymbose terminal tuft. Perennial: flowers in August and September: found by Mr. Holbech on Berryhead, Devonshire. *Engl. Bot.* vol. xxxv. pl. 2505. *Engl. Fl.* vol. iii. p. 402.

22. DIOTIS.

Common calyx hemispherical, imbricated, with oblong, obtuse scales. Compound corolla uniform, level, of numerous, perfect, regular florets, about the length of the calyx; their limb with five broadish, spreading segments; the tube contracted at the top, elongated at the base into two honey-bearing spurs, finally separating and remaining attached to the germen. Filaments hair-like, very short. Anthers united into a cylindrical tube, as long as the corolla. Germen oblong, slender. Style thread-shaped, as long as the stamens. Stigmas obtuse, spreading. Seed oblong, compressed, bordered at each side with the spurs of the corolla; seed-down none. Receptacle convex, covered with oblong, hair-tipped scales.

D. maritima. Sea Cotton-weed.——The whole plant white and cottony; stems about a foot high, branched: leaves lance-shaped, obtuse, crenate: flowers yellow. Perennial: flowers in August and September: grows in sand, on the sea-coast of the south of England. *Engl. Bot.* vol. ii. pl. 141: *Santolina maritima. Engl. Fl.* vol. iii. p. 403.

POLYGAMIA SUPERFLUA.

23. TENACETUM.

Common calyx hemispherical, imbricated, of numerous, oblong, close scales, the innermost membranous at the edges. Compound corolla of two kinds of florets: those of the disk numerous, perfect, tubular, regular, with a five-cleft limb; those of the ray few, without stamens, tubular at the base, with a flat three-cleft limb. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen inversely egg-shaped, compressed. Style thread-shaped, as long as the stamens. Stigmas obtuse, recurved. Seed oblong, angular, crowned with a slight membranous border. Receptacle convex, dotted, naked.

T. vulgáre. Common Tansy. Leaves pinnatifid, deeply serrate. ——Stems two or three feet high, terminating in a corymb of yellow flowers. The seeds are said to expel intestinal worms. Perennial: flowers in July and August: grows in the borders of fields, and by roads, generally near houses. *Engl. Bot.* vol. xviii. pl. 1229. *Engl. Fl.* vol. iii. p. 405.

24. ARTEMI'SIA.

Common calyx roundish, imbricated, of rounded, close scales, membranous at the edges. Compound corolla of two kinds of florets: those of the disk numerous, perfect, tubular, their limb with five segments; those of the ray few, destitute of stamens, generally without a petal, or awl-shaped, entire. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen small, egg-shaped. Style thread-shaped, as long as the stamens. Stigmas involute. Seed inversely egg-shaped; seed-down none. Receptacle nearly flat, naked or hairy.

A. campéstris. Field Southernwood. Leaves divided into many linear segments; stems at first prostrate, after flowering erect.—— Nearly two feet high: leaves smooth on the upper side, downy beneath: flowers drooping, small, yellow, in slender, terminal, leafy clusters. Perennial: flowers in August: grows on sandy heaths, in Norfolk and Suffolk. *Engl. Bot.* vol. v. pl. 338. *Engl. Fl.* vol. iii. p. 406.

A. maritima. Drooping-flowered Sea-wormwood. Leaves pinnatifid, the uppermost undivided, downy; clusters drooping; flowers drooping, oblong, downy; receptacle naked.——Stems woody, furrowed, hoary; flowers yellow, in leafy clusters. Perennial: flowers in August: grows on the sea-shore. *Engl. Fl.* vol. iii. p. 407.

A. gállica. Upright-flowered Sea-wormwood. Leaves downy, pinnatifid, the root-leaves with very narrow segments, the uppermost undivided; flowers erect, oblong, downy; receptacle naked. Perennial: flowers in August: grows on the banks of rivers near the sea. *Engl. Bot.* vol. xiv. pl. 1001: *A. maritima. Engl. Fl.* vol. iii. p. 408.

A. Absínthium. Common Wormwood. Leaves divided into many deep flat segments, downy; flowers drooping, hemispherical; receptacle hairy.——Stems about a foot high, bushy, furrowed: leaves twice pinnatifid: flowers pale yellow, in leafy clusters. The whole plant is intensely bitter, aromatic, and somewhat nauseous. Infusion of the leaves is considered a good stomachic, and the essential oil is used for destroying worms. Perennial: flowers in August: grows in waste ground, near houses. *Engl. Bot.* vol. xviii. pl. 1230. *Engl. Fl.* vol. iii. p. 408.

A. vulgáris. Mugwort. Leaves pinnatifid, flat, cut, downy beneath; clusters simple; flowers egg-shaped; receptacle naked.——Stems from two to four feet high, erect, branched, panicled, smooth: leaves dark green above, white and downy beneath: clusters erect, leafy: flowers purplish. Slightly bitter and aromatic. Perennial: flowers in July and August: grows about hedges and walls; common. *Engl. Bot.* vol. xiv. pl. 978. *Engl. Fl.* vol. iii. p. 409.

25. GNAPHA'LIUM.

Common calyx roundish, imbricated, with membranous coloured scales. Compound corolla with the florets of the disk perfect, tubular, five-cleft at the margin; some florets destitute of stamens, and often of corolla, either marginal or interspersed in the circumference of the disk; their corolla, when present, slender. Filaments five, hair-like, short. Anthers united into a cylindrical tube. Germen inversely egg-shaped, angular. Style thread-shaped, as long as the floret. Stigmas two, spreading, notched. Seed inversely egg-shaped, small. Down simple or feathery. Receptacle naked.

* *Calyx yellow.*

G. lúteo-álbum. Jersey Cudweed. Leaves half embracing the stem, between linear and oblong, waved, woolly on both sides; flowers in tufts.——Entirely covered with white cottony down: stems from three to twelve inches high: leaves alternate, the lower obtuse, the upper acute: flowers in crowded heads. Annual: flowers in July and August: grows in Jersey and the south of England. *Engl. Bot.* vol. xiv. pl. 1002. *Engl. Fl.* vol. iii. p. 411.

** *Calyx white, or reddish.*

G. margaritáceum. American Cudweed. Leaves between linear and lance-shaped, acutely pointed, alternate, loosely cottony above, densely beneath; stem branched at the upper part; flowers corymbose.——Stems two feet high, erect, cottony: flowers numerous, with white calyxes. Perennial: flowers in August: grows in moist meadows, in the south of England and Wales. *Engl. Bot.* vol. xxix. pl. 2018. *Engl. Fl.* vol. iii. p. 412.

G. dioicum. Mountain Cudweed. Shoots procumbent; stem simple; corymb simple; flowers dicecious.——Stems solitary, from four to six inches high, cottony: leaves scattered, greenish above, white beneath, lance-shaped: flowers white or rose-coloured. Perennial; flowers in June and July: grows on dry heaths and in rocky places; common in

mountainous districts. *Engl. Bot.* vol. iv. pl. 267. *Engl. Fl.* vol. iii. p. 413.

*** *Calyx brown.*

G. sylvaticum. Highland Cudweed. Stem simple, erect; spike leafy, nearly erect; leaves lance-shaped, tapering at the base, cottony on both sides.——Stem from three to twelve inches high, cottony, terminating in a dense leafy spike with yellowish flowers. Perennial: flowers in August: grows in dry pastures in the Highlands of Scotland. *Engl. Bot.* vol. xiii. pl. 913. *Engl. Fl.* vol. iii. p. 414.

G. réctum. Upright Wood-Cudweed. Stem simple, erect; spike leafy, compound; leaves lance-shaped inclining to linear, bare on the upper side, silky beneath.——Stem upwards of a foot high: flowers yellow, in a long compound spike. Perennial: flowers in August: grows in woods, thickets, pastures, and sometimes corn-fields. *Engl. Bot.* vol. ii. pl. 124. *Engl. Fl.* vol. iii. p. 415.

G. supínum. Dwarf Alpine Cudweed. Stem simple, recumbent, terminating in a simple few-flowered cluster; leaves lance-shaped, inclining to linear, downy on both sides.——Stems from two to four inches long, slender, cottony, with a cluster of from three to six yellowish flowers. Perennial: flowers in July: grows towards the summits of the higher mountains of the Highlands of Scotland, chiefly along rivulets. *Engl. Bot.* vol. xvii. pl. 1193. *Engl. Fl.* vol. iii. p. 415.

G. uliginósum. Marsh Cudweed. Stem much branched, spreading; leaves between lance-shaped and linear, cottony on both sides; flowers in dense terminal clusters, which are shorter than the leaves.——Stems from five to eight inches high, densely cottony: flowers yellow. Annual: flowers in August: grows in watery places, especially where water has stood during the winter. *Engl. Bot.* vol. xvii. pl. 1194. *Engl. Fl.* vol. iii. p. 416.

G. gállicum. Narrow-leaved Cudweed. Stem erect, forked; leaves linear, revolute, acute, downy; flowers oblong, crowded in very short axillar clusters.——Stems about eight inches high, leafy, cottony: flowers yellow, with few florets. Annual: flowers in July and August: grows in corn-fields; rare. *Engl. Bot.* vol. xxxiii. pl. 2369. *Engl. Fl.* vol. iii. p. 417.

G. mínimum. Least Cudweed. Stem erect, much branched; leaves lance-shaped, acute; flowers conical, in dense, lateral, and terminal tufts.——Stems from three to six inches high, cottony: flowers yellow. Annual: flowers in July: grows in sandy meadows and pastures; common. *Engl. Bot.* vol. xvii. pl. 1157. *Engl. Fl.* vol. iii. p. 418.

G. germánicum. Common Cudweed. Stem erect, forked; leaves lance-shaped; heads of flowers globular, lateral, and terminal; scales of the calyx bristle-pointed.——Stem about a foot high, terminated by a head of flowers, from beneath which two or three branches come off, terminated each by a head of flowers, and sub-dividing in the same manner. Annual: flowers in July and August: grows in dry pastures, gravel-pits, and waste grounds; common. *Engl. Bot.* vol. xiv. pl. 946. *Engl. Fl.* vol. iii. p. 418.

26. CONY'ZA.

Common calyx imbricated, egg-shaped or roundish, with acute, stiff scales, covered with prominent points. Compound corolla: florets tubular; those of the disk numerous, funnel-shaped, with few equal segments, perfect and fertile; those of the circumference cylindrical, with an oblique, strap-shaped, three-cleft limb, and having only a pistil. Filaments five, hair-like, very short. Anthers united into a cylindrical tube. Germen oblong. Style thread-shaped, as long as the corolla. Stigmas two, spreading. Seed oblong, uniform in all the florets; seed-down simple, sessile. Receptacle slightly convex, naked.

C. squarro'sa. Plowman's Spikenard. Leaves between lance-shaped and egg-shaped, crenate, downy; stem herbaceous, corymbose; scales of the calyx recurved.——Soft and downy: stem erect, two or three feet high: flowers dull yellow. Biennial: flowers in July: grows in mountainous meadows and pastures. *Engl. Bot.* vol. xvii. pl. 1195. *Engl. Fl.* vol. iii. p. 420.

27. ERI'GERON.

Common calyx imbricated, egg-shaped; scales linear, erect, the innermost longest. Compound corolla rayed; florets of the disk numerous, perfect, funnel-shaped, their limb with five equal segments; those of the ray numerous, tubular at the base, with a strap-shaped, tapering, nearly erect limb, entire or slightly toothed. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen inversely egg-shaped, angular. Style thread-shaped. Stigmas two, oblong, slightly spreading. Seed small, inversely egg-shaped; seed-down sessile, simple, rough. Receptacle flat, naked.

E. canadénsis. Canadian Flea-bane. Stem panicled, rough with hairs; leaves lance-shaped, rough-edged, the lower toothed.——Stem erect, angular, two feet high, with very numerous yellowish flowers. Annual: flowers in August and September: grows in cultivated ground, and among rubbish, about London; at St. Vincent's Rocks, Bristol; and other places in England. *Engl. Bot.* vol. xxix. pl. 2019. *Engl. Fl.* vol. iii. p. 421.

E. ácris. Blue Flea-bane. Flower-stalks alternate, mostly one-flowered, leaves lance-shaped, obtuse, sessile; seed-down nearly as long as the florets of the ray.——Stem from one to two feet high, erect, branched, downy: flowers yellow. Biennial: flowers in July and August: grows in dry pastures. *Engl. Bot.* vol. xvii. pl. 1156. *Engl. Fl.* vol. iii. p. 422.

E. alpínus. Alpine Flea-bane. Stem commonly one-flowered; calyx hairy; seed-down half as long as the florets of the ray.——Stems from four to six inches high: leaves sessile, lance-shaped, entire, hairy: flower rather large, pale purple. Perennial: flowers in July: grows on rocks on the Highland mountains: found on Ben Lawers by Mr. Dickson. *Engl. Bot.* vol. vii. pl. 464. *Engl. Fl.* vol. iii. p. 423.

28. TUSSILA'GO.

Common calyx simple, cylindrical, with from fifteen to twenty linear, erect, parallel, equal scales. Compound corolla various: florets in some all tubular, with five, sometimes four equal segments, furnished with stamens and pistils; in others the florets of the ray are strap-shaped, very short. Anthers united or converging. Germen in all the florets inversely egg-shaped, short, often imperfect. Style thread-shaped. Stigmas two, protruded, linear when perfect, thick and short when abortive. Seed oblong, compressed, seldom perfected; seed-down sessile, simple. Receptacle naked.

T. Fárfara. Colt's-foot. Scape one-flowered, imbricated with scales; leaves heart-shaped, angular, toothed, white and cottony beneath.——Stalk ten inches high, with a large bright yellow rayed flower; leaves glaucous above. The downy substance of the leaves, after being dipped in saltpetre, makes excellent tinder. The leaves are bitter and mucilaginous, and were formerly used for coughs and pulmonary complaints. Perennial: flowers in March and April: grows generally in clayey soil, by rivers and ditches. *Engl. Bot.* vol. vi. pl. 429. *Engl. Fl.* vol. iii. pl. 425.

T. Petasites. Butter-bur. Panicle dense, between egg-shaped and oblong; flowers without rays; leaves heart-shaped, unequally toothed, with a lateral rib on each side at the base.——Stalk about eight inches high, of dense, pale purple flowers: florets generally furnished with stamens and pistils, but rarely perfecting seeds. In a variety, known by the name of *T. hybrida*, the florets have pistils, but seldom stamens, and produce perfect seeds. Leaves two feet or more in diameter, the largest of any British plant. Perennial: flowers in March and April: grows by rivers; common. *Engl. Bot.* vol. vi. pl. 431 and pl. 450. *Engl. Fl.* vol. iii. p. 426.

29. SENE'CIO.

Common calyx double; the inner cylindrical, of numerous, equal, parallel, linear scales; the outer of minute imbricated scales at the base of the others; all withered-looking and generally black at the tip. Compound corolla, longer than the calyx: florets of the disk numerous; all perfect, tubular, with five equal segments; those of the ray strap-shaped, slightly toothed, without stamens, and sometimes wanting. Filaments hair-like, short. Anthers united into a cylindrical tube. Germen inversely egg-shaped, small. Style thread-shaped, as long as the stamens. Stigmas two, oblong, spreading. Seed inversely egg-shaped; seed-down simple, sessile. Receptacle naked, slightly convex.

* *Florets all tubular.*

S. vulgáris. Common Groundsel. Flowers destitute of ray; leaves pinnatifid, toothed, half-embracing the stem.——Stem about six inches high, branched, with numerous corymbose yellow flowers. Annual:

flowers from February to November; but individuals may be got in flower through the winter: grows in cultivated and waste ground; common. *Engl. Bot.* vol. xi. pl. 747. *Engl. Fl.* vol. iii. p. 428.

** *Flowers rayed, the ray rolled back.*

S. viscósus. Stinking Groundsel. Rays revolute; leaves half-embracing, pinnatifid, clammy; outer calyx loose, nearly as long as the inner; stem branched.——The whole plant clammy, generally covered with dust, with a disagreeable smell: stem about a foot high: flowers yellow. Annual: flowers from June to October: grows in waste ground, and among rubbish; not uncommon. *Engl. Bot.* vol. i. pl. 32. *Engl. Fl.* vol. iii. p. 429.

S. lividus. Green-scaled Groundsel. Rays revolute; leaves embracing the stem, lance-shaped, pinnatifid, toothed; outer calyx short, the tips of the scales not discoloured.——About a foot high, downy, somewhat clammy: flowers yellow. Annual: flowers in September and October: grows on dry heaths in the north of England. *Engl. Bot.* vol. xxxv. pl. 2515. *Engl. Fl.* vol. iii. p. 430.

S. sylváticus. Mountain Groundsel. Rays revolute; leaves sessile, pinnatifid, lobed, minutely toothed; scales of the calyx linear; stem erect, straight, branched, corymbose.——Stem from six inches to two feet high or more. It emits a disagreeable odour. Annual: flowers in July and August: grows in dry barren pastures; common. *Engl. Bot.* vol. xi. pl. 784. *Engl. Fl.* vol. iii. p. 430.

*** *Flowers with spreading rays: leaves pinnatifid.*

S. tenuifólius. Hoary Ragwort. Ray spreading, with oblong, minutely toothed corollas; leaves pinnatifid, paler and cottony beneath; stem erect, loosely cottony.——Stem two or three feet high, furrowed: leaves alternate, sessile: flowers yellow. Perennial: flowers in July and August: grows in woods, hedges, and by roads, in England. *Engl. Bot.* vol. viii. pl. 574. *Engl. Fl.* vol. iii. p. 432.

S. Jacobæ'a. Common Ragwort. Ray spreading, somewhat revolute, with oblong, toothed corollas; leaves lyrate, twice pinnatifid, divaricate, toothed, smooth: seeds hairy.——Stem about two feet high, purple at the base, branched: flowers golden-yellow, very numerous, in corymbs, emitting a strong smell of honey. Perennial: flowers in July and August: grows in dry pastures and by roads; common. *Engl. Bot.* vol. xvi. pl. 1130. *Engl. Fl.* vol. iii. p. 438.

S. aquáticus. Marsh Ragwort. Ray spreading, with elliptical toothed corollas; leaves lyrate, serrate, smooth, the lower inversely egg-shaped, undivided; seeds smooth.——Stem about two feet high, purple: flowers larger and fewer than in the preceding species, scentless, in corymbs. Perennial: flowers in July and August: grows by the sides of rivers, and in wet pastures; not uncommon. *Engl. Bot.* vol. xvi. pl. 1131. *Engl. Fl.* vol. iii. p. 434.

**** *Flowers with rays: leaves undivided.*

S. paludósus. Great Fen Ragwort. Bird's-tongue Groundsel. Ray spreading, with oblong, toothed corollas; flowers corymbose; leaves

lance-shaped, tapering, acutely serrate, somewhat cottony beneath; stem quite straight, hollow.——Stem from two to five feet high, simple: leaves very long, at first woolly; flowers yellow, not very numerous but large: seeds hairy. Perennial: flowers in June and July: grows in ditches and fens in the east part of England; very rare. *Engl. Bot.* vol. x. pl. 650. *Engl. Fl.* vol. iii. p. 434.

S. saracénicus. Broad-leaved Ragwort. Ray spreading, the corolla broad, nearly entire; flowers corymbose; leaves lance-shaped, serrate, minutely downy; stem solid.——Stems from three to five feet high, erect; flowers yellow. Perennial: flowers in July and August: grows in moist meadows and pastures, in various parts of England, and the Lowlands of Scotland. *Engl. Bot.* vol. xxxi. pl. 2211. *Engl. Fl.* vol. iii. p. 435.

30. ASTER.

Common calyx oblong, imbricated; the inner scales standing out at the points, the lowermost spreading. Compound corolla rayed; florets of the disk numerous, perfect, tubular, with five equal, spreading segments; those of the ray more than ten, strap-shaped, oblong, three-toothed, finally revolute, without stamens. Filaments hair-like, short. Anthers united into a cylindrical tube. Germen oblong. Style thread-shaped. Stigmas two, oblong, spreading, those of the disk larger. Seed inversely egg-shaped. Down sessile, hair-like. Receptacle naked, almost flat.

A. Tripólium. Sea Star-wort. Stem herbaceous, corymbose; leaves lance-shaped, entire, fleshy, obscurely three-ribbed; scales of the calyx obtuse, membranous.——Stem two or three feet high, round, smooth: leaves smooth, the lower stalked, the upper sessile and more narrow: flowers large, purple, with a yellow disk. Perennial: flowers in August and September: grows in salt marshes. *Engl. Bot.* vol. ii. pl. 87. *Engl. Fl.* vol. iii. p. 457.

31. SOLIDA'GO.

Common calyx oblong, imbricated, with oblong, pointed, straight scales. Compound corolla rayed; florets of the disk numerous, perfect, tubular, with five equal, spreading segments; those of the ray from five to ten, strap-shaped, oblong, three-toothed, without stamens. Filaments hair-like, short. Anthers united into a cylindrical tube. Germens oblong. Style thread-shaped. Stigmas two, revolute. Seed somewhat inversely egg-shaped; seed-down sessile, hair-like. Receptacle nearly flat, naked.

S. Virgaúrea. Common Golden-rod. Root-leaves elliptical, those of the stem lance-shaped; clusters panicled, erect, crowded.——Stem from six inches to three feet high, erect, generally zig-zag, purple at the lower part, downy above, terminating in a leafy, generally compound cluster of small yellow flowers. Perennial: flowers in July and August: grows in woods, rocky places by rivers, and upland pastures; common. *Engl. Bot.* vol. v. pl. 301. *Engl. Fl.* vol. iii. p. 438.

32. INULA.

Common calyx hemispherical, imbricated, with the scales spreading at the points. Compound corolla rayed: florets of the disk very numerous, perfect, tubular, with five equal, erect or spreading segments; those of the ray numerous, strap-shaped, linear, three-toothed, without stamens. Filaments thread-shaped, short. Anthers united into a cylindrical tube, with five acute teeth above, and ten straight bristles at the base. Germens oblong. Style thread-shaped, cleft. Stigmas spreading, oblong. Seed linear, four-cornered; seed-down simple, sessile. Receptacle nearly flat, naked, or slightly scaly.

I. Helénium. Elecampane. Leaves egg-shaped, serrate, rugged, embracing the stem, downy beneath; calyx egg-shaped, leafy.—Root thick, branched: stem three feet high, furrowed, branched and downy above; root-leaves stalked: flowers solitary, terminal, large, bright yellow. Infusion of the fresh root, sweetened with honey, is esteemed good for promoting expectoration. Perennial: flowers in July and August: grows in moist meadows and pastures, near houses. *Engl. Bot.* vol. xxii. pl. 1546. *Engl. Fl.* vol. iii. p. 440.

I. dysentérica. Common Flea-bane. Leaves oblong, heart-shaped at the base, and embracing the stem, downy; stem woolly, panicled; scales of the calyx bristle-shaped.——Root creeping: stem a foot high or more, corymbose above, with large yellow flowers. It has a peculiar aromatic scent, and is asserted by Linnæus to have cured the Russian army under General Keith of dysentery. Perennial: flowers in August: grows in moist meadows and pastures, and by the sides of brooks and ditches; rare in Scotland. *Engl. Bot.* vol. xvi. pl. 1115. *Engl. Fl.* vol. iii. p. 441.

I. pulicária. Small Flea-bane. Leaves narrow, lance-shaped, embracing the stem, waved; stem much branched, hairy; flowers hemispherical, with very short rays.——Stem about eight inches high, corymbose, purplish: leaves scattered, recurved: flowers solitary, terminal, pale yellow: receptacle with a few short hairs. Annual: flowers in September: grows in moist places, where water has stood during winter. *Engl. Bot.* vol. xvii. pl. 1196. *Engl. Fl.* vol. iii. p. 441.

I. crithmóides. Samphire-leaved Flea-bane. Leaves linear, fleshy, generally three-pointed.——Stem a foot high, with a few terminal yellow flowers. Perennial: flowers in August: grows in wet ground on the coast; rare. *Engl. Bot.* vol. i. pl. 68. *Engl. Fl.* vol. iii. p. 442.

33. CINERA'RIA.

Common calyx simple, cylindrical, of numerous, equal, permanent scales. Compound corolla rayed; florets of the disk numerous, perfect, tubular, with five equal, erect segments; those of the ray equal in number to the scales of the calyx, strap-shaped, oblong, toothed, without stamens. Filaments thread-shaped, short. Anthers united into a cylindrical, five-notched tube. Germen oblong. Style thread-shaped, as long as the stamens. Stigmas spreading, oblong. Seed linear,

four-cornered; seed-down hair-like, sessile, abundant, longer than the seed.

C. palústris. Marsh Flea-wort. Flowers in a corymb; leaves broadly lance-shaped, toothed or sinuate; stem woolly.——Stem three feet high, downy and clammy: leaves sessile: flowers pale yellow. Perennial: flowers in June and July: grows in marshes and ditches in various parts of England. *Engl. Bot.* vol. iii. pl. 251. *Engl. Fl.* vol. iii. p. 443.

C. integrifólia. Mountain Flea-wort. Flowers in a simple and imperfect umbel, with several lance-shaped bracteas; root-leaves elliptical, obscurely toothed, the rest lance-shaped, all cottony.——Stem six or eight inches high, simple, terminating in an imperfect umbel of a few bright yellow flowers. Perennial: flowers in May and June: grows in hilly pastures in the south of England. *Engl. Bot.* vol. iii. pl. 152. *Engl. Fl.* vol. iii. p. 444.

34. DORO'NICUM.

Common calyx of about twenty linear, equal, erect scales in a double row. Compound corolla rayed; florets of the disk numerous, perfect, tubular, with five equal, rather spreading segments; those of the ray equal in number to the scales of the calyx, strap-shaped, linear, spreading, toothed, without stamens. Filaments hair-like, very short. Anthers united into a cylindrical, five-notched tube. Germen inversely egg-shaped. Style thread-shaped, as long as the stamens. Stigmas small, spreading. Seed inversely egg-shaped, compressed, furrowed; seed-down sessile, hair-like, wanting in the seeds of the ray. Receptacle naked, flat.

D. Pardaliánches. Great Leopard's-bane. Leaves heart-shaped, toothed; root-leaves stalked, the rest embracing the stem.——Stem two or three feet high, hollow, leafy, branched above, with a few solitary, terminal, large bright yellow flowers. Perennial: flowers in May: grows in hilly pastures, hedges, and woods, near houses. *Engl. Bot.* vol. ix. pl. 630. *Engl. Fl.* vol. iii. p. 446.

35. BE'LLIS.

Common calyx simple, hemispherical, erect, of from ten to twenty lance-shaped equal scales, placed in two rows. Compound corolla rayed; florets of the disk numerous, perfect, tubular, with five equal spreading segments: those of the ray strap-shaped, slightly notched, more numerous than the scales of the calyx. Filaments hair-like, very short. Anthers united into a cylindrical, notched tube. Germens inversely egg-shaped. Style thread-shaped. Stigmas oblong, spreading. Seed inversely egg-shaped, compressed; seed-down none. Receptacle conical, hollow, dotted and naked.

B. perénnis. Common Daisy. Root creeping; flower-stalk leafless. ——Leaves numerous, lying flat on the ground; inversely egg-shaped, crenate, slightly hairy, tapering at the base; stalks from two to four inches long, round, hairy, each bearing a single flower, having a

yellow conical disk, and a white ray tinged with purple. A variety, called the Hen and Chicken Daisy, sometimes occurs, in which several small stalks, bearing diminutive flowers, spring from the flower. Perennial: flowers from March to November, but individuals may be seen in flower at all seasons: grows in pastures and meadows, abundantly. *Engl. Bot.* vol. vi. pl. 424. *Engl. Fl.* vol. iii. p. 447.

36. CHRYSA'NTHEMUM.

Common calyx hemispherical, closely imbricated, with numerous, roundish scales, membranous and dilated at the margin, the innermost terminating in a filmy appendage. Compound corolla rayed: florets of the disk very numerous, perfect, tubular, with five equal, spreading segments; those of the ray more than twelve, strap-shaped, between elliptical and oblong, with three teeth. Filaments hair-like, very short. Anthers united into a cylindrical, notched tube. Germen inversely egg-shaped. Style thread-shaped, a little longer than the stamens. Stigmas oblong, spreading. Seed oblong, or inversely heart-shaped, striated; seed-down none. Receptacle a little convex, naked.

Ch. Leucánthemum. Great White Ox-eye. Moon-flower. Leaves oblong, cut, pinnatifid at the base, clasping the stem; root-leaves inversely egg-shaped, stalked.——Stem about two feet high, erect, furrowed: flowers large, solitary, terminal, with a yellow disk, and white ray. Perennial: flowers in June and July: grows in dry pastures, and by roads; common. *Engl. Bot.* vol. ix. pl. 601. *Engl. Fl.* vol. iii. p. 449.

Ch. ségetum. Corn Marigold. Leaves clasping the stem, broadly serrate above, toothed at the base, glaucous.——Stem from one to two feet high, branched, angular, bearing several terminal, large, rich yellow flowers. Annual: flowers in June and July: grows in cornfields, abundantly. *Engl. Bot.* vol. viii. pl. 540. *Engl. Fl.* vol. iii. p. 450.

37. PYRETHRUM.

Common calyx hemispherical, closely imbricated, with several oblong, nearly equal scales, bordered with an equal membrane. Compound corolla rayed; florets of the disk numerous, perfect, tubular, with five equal, spreading segments; those of the ray numerous, strap-shaped, spreading, with three terminal teeth. Filaments hair-like, short. Anthers united into a cylindrical tube. Germens angular, abrupt. Style thread-shaped, not longer than the anthers. Stigmas obtuse, spreading. Seed oblong, angular, abrupt, crowned by an elevated membranous border.

P. Parthénium. Common Feverfew. Leaves stalked, compound, flat; leaflets egg-shaped, cut; panicle corymbose; stem erect.——Stem about two feet high: flowers with a yellow disk and white ray. The whole plant has a strong smell, and bitter taste. Perennial: flowers in June and July: grows in waste-ground, and on rocks and walls. *Engl. Bot.* vol. xviii. pl. 1231. *Engl. Fl.* vol. iii. p. 451.

P. inodórum. Corn or *Scentless Feverfew.* Leaves sessile, pinnate, with numerous thread-shaped, pointed segments; stem branched, spreading; crown of the seeds entire.——Stem about a foot high, angular, smooth: flowers large, with a convex yellow disk and a pure white ray, on long, terminal, naked stalks. Annual: flowers in August and September: grows in cultivated ground and by roads; common. *Engl. Bot.* vol. x. pl. 676. *Engl. Fl.* vol. iii. p. 452.

P. maritimum. Sea Feverfew. Leaves sessile, twice pinnate, fleshy, pointless, convex above, keeled beneath; crown of the seeds lobed. ——Stems about a foot long, procumbent, smooth, branched, with large flowers, having a very convex yellow disk and a white ray. Perennial: flowers in July and August: grows in sandy soil on the sea-coast. *Engl. Bot.* vol. xiv. pl. 979. *Engl. Fl.* vol. iii. p. 453.

38. MATRICA'RIA.

Common calyx slightly convex, closely imbricated, with several oblong, nearly equal scales, membranous at the edges. Compound corolla rayed: florets of the conical disk numerous, perfect, tubular, with five equal, spreading segments; those of the ray numerous, strap-shaped, spreading, abrupt, with three terminal teeth. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen inversely egg-shaped. Style thread-shaped, as long as the anthers. Stigmas spreading, obtuse. Seed inversely egg-shaped, angular; seed-down none. Receptacle naked, nearly cylindrical, hollow.

M. Chamomilla. Common Wild Chamomile. Leaves smooth, twice pinnatifid, with linear segments; scales of the calyx dilated, obtuse. ——Stem a foot high, erect, much branched, smooth, striated: leaves sessile, deep green: flowers large, with a conical yellow disk and white ray. Has the smell of Common Chamomile, which it also resembles in the flowers. Annual: flowers from June to October: grows in cultivated and waste ground. *Engl. Bot.* vol. xviii. pl. 1232. *Engl. Fl.* vol. iii. p. 454.

39. ANTHEMIS.

Common calyx hemispherical, closely imbricated, with several oblong, nearly equal scales. Compound corolla rayed: florets of the disk numerous, perfect, tubular, with five equal spreading segments; those of the ray numerous, strap-shaped, abrupt, three-toothed. Filaments very short, hair-like. Anthers united into a cylindrical tube. Germens inversely egg-shaped. Style thread-shaped, as long as the anthers. Stigmas oblong, spreading. Seed inversely egg-shaped, somewhat compressed, generally crowned with a slight border. Receptacle convex, covered with lance-shaped chaffy scales.

A. maritima. Sea Chamomile. Leaves twice pinnatifid, acute, fleshy, dotted, somewhat hairy; stem prostrate; scales of the receptacle acute, prominent.——Stems about eight inches long, angular, branched, cottony: inner scales of the caylx torn: disk of the flowers convex, yellow:

ray cream-coloured. Annual: flowers in July: found at Sunderland, in Durham, by Mr. E. Robson. *Engl. Bot.* pl. 2570. *Engl. Fl.* v. iii. p. 456.

A. nóbilis. Common Chamomile. Leaves twice pinnate, with semi-cylindrical, acute, somewhat downy segments; stem procumbent; scales of the receptacle membranous, obtuse, shorter than the disk.——Stems about eight inches long, branched, furrowed, downy: flowers terminal, solitary, with a convex yellow disk, and white spreading ray. The leaves and flowers have a strong smell, and a bitter taste. The latter are used in infusion as a stomachic and antispasmodic. Perennial: flowers in August and September: grows in dry pastures in various parts of England. *Engl. Bot.* vol. xiv. pl. 980. *Engl. Fl.* vol. iii. p. 456.

A. arvénsis. Corn Chamomile. Leaves twice pinnatifid, hairy, with narrow lance-shaped segments; receptacle conical, with lance-shaped, acute, prominent scales; seeds crowned with a border.——Stem from twelve to eighteen inches high, erect, much branched, covered with soft hairs: flowers solitary, on long terminal stalks, their disk and scales bright yellow, the ray white. Biennial: flowers in June and July: grows in fields and waste ground; not common. *Engl. Bot.* vol. ix. pl. 602. *Engl. Fl.* vol. iii. p. 457.

A. Cótula. Stinking Chamomile. Leaves twice pinnatifid, smooth, with linear segments; receptacle conical, with bristle-shaped scales; seeds without a border.——Stem a foot or more high, erect, bushy: flowers solitary, on terminal striated stalks: disk pale yellow: ray white. Fetid and acrid, blistering the skin. Annual: flowers in June and July: grows in corn-fields and waste ground. *Engl. Bot.* vol. xxv. pl. 1772. *Engl. Fl.* vol. iii. p. 458.

A. tinctória. Ox-eye Chamomile. Leaves twice pinnatifid, serrate, downy beneath; stem erect, corymbose; seeds crowned with a membranous undivided border.——Stem eighteen inches high, angular: leaves sessile, with acute, notched segments, cottony beneath: flowers large, bright yellow in both the ray and disk. Perennial: flowers in July and August. Found in Essex by Mr. Dickson, and near Forfar by Mr. G. Don. *Engl. Bot.* vol. xxi. pl. 1472. *Engl. Fl.* vol. iii. p. 459.

40. ACHILLE'A.

Common calyx egg-shaped, imbricated, with several egg-shaped, acute, close scales. Compound corolla rayed: florets of the disk perfect, tubular, with five equal spreading segments; those of the ray from five to ten, flat, roundish, inversely heart-shaped, with a small intermediate lobe. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen small, inversely heart-shaped. Style thread-shaped, as long as the stamens. Stigmas obtuse, spreading. Seed inversely egg-shaped, abrupt; seed-down none. Receptacle narrow, covered with lance-shaped, chaffy scales.

A. Ptármica. Sneeze-wort. Goose-tongue. Leaves narrow, lance-shaped, pointed, acutely serrate, smooth.——Stem simple, erect, from six inches to two feet high, terminating in a large, nearly simple corymb, with white flowers: leaves very minutely, acutely, doubly serrated. Perennial: flowers from the middle of July to the end of September: grows in moist pastures, by ditches, and at the edges of

corn-fields; not uncommon. *Engl. Bot.* vol. xi. pl. 757. *Engl. Fl.* vol. iii. p. 460.

A. Millefólium. Common Yarrow, or *Milfoil.* Leaves twice pinnate, with lance-shaped, pointed segments, hairy on the back; stems furrowed.——Stems commonly decumbent at the base, then erect, about a foot high, terminating in a dense, often divided corymb, with white or purplish flowers. Perennial: flowers from the middle of June to the end of October: grows on banks, by road-sides, and in dry pastures. *Engl. Bot.* vol. xi. pl. 758. *Engl. Fl.* vol. iii. p. 462.

A. tomentósa. Woolly Yellow Milfoil, or *Yarrow.* Leaves twice pinnatifid, with linear, acute, crowded segments; corymbs repeatedly compound.——Stems about a foot high, decumbent at the base, then erect, terminating an often-divided corymb of yellow flowers. Perennial: flowers in July and August: on Spittle Hill, Dunbartonshire, and on hills near Paisley, discovered by Mr. Hugh Ross. *Engl. Fl.* vol. iii. p. 462. *Engl. Bot.* pl. 2532.

POLYGAMIA FRUSTRANEA

41. CENTAURE'A.

Common calyx roundish, closely imbricated, with scales of various forms. Compound corolla of numerous tubular florets; those of the disk perfect, regular, with five equal spreading segments, an oblong limb, and a slender tube; those of the ray fewer, with a rudimentary pistil, not perfecting seed, spreading, often wanting, funnel-shaped, with five or more unequal segments. Filaments hair-like, very short. Anthers united into a cylindrical tube. Germen small, oblong. Style thread-shaped, about the length of the stamens. Stigma blunt, often cleft, prominent. Style and stigma very small in the florets of the ray. Seed in the disk only, of various forms: seed-down various, or wanting. Receptacle bristly.

* *Scales of the calyx jagged or fringed.*

C. Jacéa. Brown Knapweed. Scales of the calyx membranous, torn, the lower ones pinnatifid; leaves between lance-shaped and linear, root-leaves broader, toothed; flowers with rays.——Stem a foot high, erect, angular, branched: flowers solitary, terminal, light crimson, on tumid stalks: scales of the calyx brown, the outer deeply pinnatifid, the inner terminating in a light brown, jagged lobe. Perennial: flowers in August and September: grows in meadows and moist woods: found in Sussex, by Mr. Borrer; in Angus-shire, by Mr. D. Don. *Engl. Bot.* vol. xxiv. pl. 1678. *Engl. Fl.* vol. iii. p. 464.

C. nigra. Black Knapweed. Scales of the calyx lance-shaped, fringed at the tip with hair-like teeth; lower leaves lyre-shaped; upper ones between egg-shaped and lance-shaped; flowers without rays.——Stem from two to three feet high, woolly when young, afterwards rough: leaves rough: scales of the calyx tipped with an egg-shaped membranous expansion of a dark-brown colour, fringed with long linear teeth: flowers purple. Perennial: flowers in July and

August: grows in dry pastures; common. *Engl. Bot.* vol. iv. pl. 278. *Engl. Fl.* vol. iii. p. 465.

C. Cyánus. Corn Blue-bottle. Scales of the calyx serrate; leaves linear, entire, the lower ones toothed towards their base.——Stem two or three feet high, slender, branched, loosely cottony, as are the leaves: flowers numerous, solitary; florets of the disk large, and of a bright blue, those of the ray short and purplish. Annual: flowers in July and August: grows in corn-fields; common. *Engl. Bot.* vol. iv. pl. 277. *Engl. Fl.* vol. iii. p. 466.

C. Scabiósa. Greater Knapweed. Scales of the calyx egg-shaped, fringed, somewhat downy; leaves pinnatifid, with lance-shaped, acute segments.——Stem three feet high, erect, branched, angular: flowers terminal, solitary, large, crimson: scales of the calyx black and triangular at the end, fringed with pale bristles. Perennial: flowers in July and August: grows in dry pastures and corn-fields. *Engl. Bot.* vol. i. pl. 56. *Engl. Fl.* vol. iii. p. 467.

** *Scales of the calyx palmate and thorny.*

C. Isnárdi. Jersey Star-thistle. Scales of the calyx with palmate spines; leaves oblong, toothed or pinnatifid, roughish, slightly embracing the stem: flowers terminal, solitary, leafy at the base.—— Stems about eight inches long, branched, recumbent: flowers light purple. Perennial: flowers in July and August: grows in pastures in Jersey, according to Mr. Dickson. *Engl. Bot.* pl. 2256. *Engl. Fl.* vol iii. p. 468.

*** *Scales of the calyx with compound thorns.*

C. Calcítrapa. Common Star-thistle. Flowers sessile; scales of the calyx with branched thorns; leaves pinnatifid; toothed; stem hairy. ——Stem short, spreading, much branched, furrowed: flowers rose-coloured: scales of the calyx terminating in a large channelled thorn, fringed at the base with smaller prickles: the filaments contract when touched. Annual: flowers in July and August: grows in dry pastures and by roads, in various parts of England. *Engl. Bot.* vol. ii. pl. 125. *Engl. Fl.* vol. iii. p. 468.

C. solstitiális. St. Barnaby's thistle. Flowers terminal, solitary; scales of the calyx with branched thorns; stem winged, with the decurrent, lance-shaped, thornless leaves.——Stem two feet high, branched, spreading, uninterruptedly winged; root-leaves lyre-shaped: flowers bright yellow. Annual: flowers in July and August: grows in corn-fields and hedges, in the south of England; rare. *Engl. Bot.* vol. iv. pl. 243. *Engl. Fl.* vol. iii. p. 469.

Class XX. GYNANDRIA.

Stamens situated on the Style or Germen.

Order I. MONANDRIA. *One Stamen.*

* *Anther of two distinct vertical cells, permanent, fixed to the summit of the style.*

1. OR'CHIS. *Nectary* with a spur behind.
2. A'CERAS. *Calyx* converging. *Nectary* without a spur, flat.

4. O'PHRYS. *Calyx* spreading. *Nectary* without a spur, convex.
3. HERMI'NIUM. *Calyx* spreading. *Petals* with lateral lobes. *Nectary* without a spur, flat.

** *Anther parallel to the stigma, of two cells, close together.*

6. NEOTTIA. *Calyx* converging, embracing the base of the flat spurless nectary. *Petals* converging. *Column* without wings.
5. GOODYE'RA. *Calyx* spreading, embracing the base of the globular inflated spurless nectary. *Petals* converging. *Column* without wings.
7. LISTE'RA. *Calyx* spreading. *Nectary* without a spur, nearly flat. *Petals* spreading. *Column* without wings.

*** *Anther terminal, fixed, permanent.*

8. EPIPACTIS. *Nectary* spurless, tumid below at the base, contracted in the middle, undivided at the end.

**** *Anther terminal, moveable, deciduous.*

9. MALA'XIS. *Nectary* embracing the column with its concave base, spurless, sessile. *Petals* spreading.
10. CORALLORHI'ZA. *Nectary* unconnected with the column, spurred or stalked at the base. *Petals* spreading.

Order II. DIANDRIA. *Two Stamens.*

11. CYPRIPE'DIUM. *Calyx* and petals spreading. *Nectary* inflated. *Column* with a terminal, dilated appendage.

Order III. HEXANDRIA. *Six Stamens.*

12. ARISTOLO'CHIA. *Calyx* of one leaf. *Corolla* none. *Stigma* six-lobed. *Capsule* six-celled.

GYNANDRIA.—MONANDRIA.

1. OR'CHIS.

Calyx superior, of three egg-shaped, partly coloured leaves. Petals two, oblong, smaller than the calyx, ascending. Nectary a roundish or oblong lip, generally lobed, larger than the petals, hanging down anteriorly between the lower leaves of the calyx, and extended behind in the form of a tubular spur. Anther of two oblong cells, each containing an inversely egg-shaped elastic mass of pollen, and opening lengthwise in front. Germen oblong or nearly cylindrical, furrowed, spirally twisted. Style thick and short. Stigma a shining moist depression, in front, under or between the masses of pollen. Capsule oblong, spiral. Seeds numerous, oval.

* *Tubers or knobs of the root undivided.*

O. bifólia. Butterfly Orchis. Lip of the nectary lance-shaped, entire, about half the length of the very long, thread-shaped spur; lateral

leaves of the calyx spreading downwards.——Tubers tapering: stem angular, about a foot high: flowers numerous, white. Perennial: flowers in June: grows in woods and open heaths. *Engl. Bot.* vol. i. pl. 22. *Engl. Fl.* vol. iv. p. 9.

O. pyramidális. Pyramidal Orchis. Lip of the nectary in three equal lobes, with two protuberances above; spur long and slender.——Tubers long: stem upwards of a foot high: leaves lance-shaped, channelled, acute: spike dense, pyramidal, rich crimson: the flowers fragrant. Perennial: flowers in July: grows in meadows and pastures; rare. *Engl. Bot.* vol. ii. pl. 110. *Engl. Fl.* vol. iv. p. 10.

O. Mório. Green-winged Meadow Orchis. Lip of the nectary four-cleft, somewhat crenate; spur blunt, ascending; leaves of the calyx many-ribbed, converging.——Tubers nearly round: stem a foot high: leaves spear-shaped: spike rather loose: flowers purple, the disk of the lip white and spotted: the leaves of the calyx ribbed with green. Perennial: flowers in May and June: grows in meadows and pastures. *Engl. Bot.* vol. xxix. pl. 2059. *Engl. Fl.* vol. iv. p. 11.

O. máscula. Early Purple or *Meadow Orchis.* Lip of the nectary four-lobed, crenate; leaves of the calyx three-ribbed, the two lateral ones reflected upwards.——Tubers elliptical: stem about a foot high: leaves chiefly radical, elliptical or lance-shaped, usually spotted with blackish: spike rather loose: flowers rich purple: the disk of the lip white and spotted, the ribs of the calyx purple. Perennial: flowers in April and May: grows in meadows and pastures. *Engl. Bot.* vol. ix. pl. 631. *Engl. Fl.* vol. iv. p. 12.

O. ustulàta. Dwarf Orchis. Lip of the nectary four-lobed, rough with small points; spur blunt, not half the length of the germen; calyx converging; leaves lance-shaped.——Tubers oval: three or four inches high: leaves without spots: spike oblong, dense: lip of the nectary white at the base with dark purple spots: leaves of the calyx dark purple. Perennial: flowers in June: grows in dry pastures. *Engl. Bot.* vol. i. pl. 18. *Engl. Fl.* vol. iv. p. 12.

O. fúsca. Great Brown-winged Orchis. Lip of the nectary five-lobed, dilated, rough with prominent points; spur blunt, not half the length of the germen; calyx converging, blunt; leaves oblong.——Tubers oval: stem from one to two feet high: spike cylindrical, rather dense, of dark purple flowers: leaves of the calyx marked externally with dark brown lines and confluent spots. Perennial: flowers in May: grows in the south of England; rare. *Engl. Bot.* vol. i. pl. 16: *O. militaris. Engl. Fl.* vol. iv. p. 13.

O. militáris. Military Orchis. Lip of the nectary five-lobed, downy, the two intermediate lobes dilated, rounded; spur blunt, not half the length of the germen; leaves of the calyx taper-pointed, converging.——Tubers oval: stem about a foot high: spike about three inches long: flowers rose-red, with the calyx-leaves of a silvery ash-colour. Perennial: flowers in May: grows in meadows and pastures. *Engl. Fl.* vol. iv. p. 15.

O. tephrosánthus. Monkey Orchis. Lip of the nectary five-lobed, downy, four of the lobes equal, linear, entire; spur blunt, not half the length of the germen; leaves of the calyx taper-pointed, converging.——The principal difference between this and the last is in the di-

visions of the lip. This and the two preceding species smell like woodruff when drying. Perennial: flowers in May; rare. *Engl. Bot.* vol. xxvii. pl. 1873: *O. militaris. Engl. Fl.* vol. iv. p. 16.

O. hircina. Lizard Orchis. Lip of the nectary downy, divided into three linear segments, the middle one very long, twisted and notched at the end; spur short and tumid; leaves of the calyx converging.—— Tubers nearly globular; stem from two to three feet high: spike rather loose, of numerous flowers: calyx green, spotted with dull purple internally. Perennial: flowers in July: grows in pastures; rare. *Engl. Bot.* vol. i. pl. 24: *Satyrium hircinum. Engl. Fl.* vol. iv. p. 17.

** *Tubers tapering, clustering.*

O. albida. White Cluster-rooted Orchis. Lip of the nectary divided into three deep acute lobes, the middle one largest; spur one-third the length of the germen.——Stem about a foot high: leaves lance-shaped: spike cylindrical, dense: flowers cream-coloured. Perennial: flowers in June: grows in grassy mountain pastures. *Engl. Bot.* vol. viii. pl. 505: *Satyrium albidum. Engl. Fl.* vol. iv. p. 18.

O. viridis. Frog Orchis. Lip of the nectary linear, three-cleft, the middle segment smallest; spur very short, slightly cleft.——Stem from four to six inches high: leaves egg-shaped, the uppermost lance-shaped: spike rather lax: flowers green. Perennial: flowers in June and July: grows in dry pastures. *Engl. Bot.* vol. ii. pl. 94: *Satyrium viride. Engl. Fl.* vol. iv. p. 20.

*** *Tubers palmate.*

O. latifolia. Broad-leaved Orchis. Lip of the nectary convex, crenate, slightly three-cleft; spur conical; bracteas longer than the flowers. ——Stem about a foot high: leaves lance-shaped: spike dense, many-flowered: flowers purple or red. Perennial: flowers in May and June: grows in meadows and pastures. *Engl. Bot.* vol. xxxiii. pl. 2308. *Engl. Fl.* vol. iv. p. 21.

A. maculata. Spotted Palmate Orchis. Lip of the nectary flat, crenate, three-lobed; spur cylindrical, shorter than the germen; bracteas shorter than the flowers.——A foot high, slender: leaves lance-shaped, spotted with purplish: flowers pale purple or whitish, variously spotted with dark purple. Perennial: flowers in June and July: grows in meadows, wet heaths and woods; common. *Engl. Bot.* vol. ix. pl. 632. *Engl. Fl.* vol. iv. p. 22.

O. conop'sea. Aromatic Palmate Orchis. Lip of the nectary divided into three equal entire lobes; spur very slender, twice as long as the germen; leaves of the calyx widely spreading.——About a foot high: leaves narrow lance-shaped: spike oblong, rather dense: flowers rich crimson, exhaling a delicious odour. Perennial: flowers in June and July: grows in pastures and heaths. *Engl. Bot.* vol. i. pl. 10. *Engl. Fl.* vol. iv. p. 23.

2. A'CERAS.

Calyx superior, of three egg-shaped, equal, converging, permanent leaves. Petals two, narrow, oblong, as long as the calyx. Nectary a lip without a spur, much longer than the calyx, narrow, oblong, with

four linear lobes, the two uppermost longest. Anther of two oblong membranous cells, close together, above the stigma, each containing an inversely egg-shaped, elastic mass of pollen. Germen oblong, furrowed, nearly straight. Style very short. Stigma a shining moist depression, in front. Capsule inversely egg-shaped, slightly curved, furrowed. Seeds very numerous.

A. anthropóphora. Green Man-orchis. Man Tway-blade. Lip longer than the germen.——Tubers roundish, hairy: stem about a foot high: leaves lance-shaped: spike long, loose, of green flowers tinged with brown. Perennial: flowers in June: grows in meadows and pastures in the south of England. *Engl. Bot.* vol. i. pl. 29: *Ophrys anthropophora. Engl. Fl.* vol. iv. p. 25.

3. HERMINIUM.

Calyx superior, of three egg-shaped, equal, spreading, permanent leaves. Petals two, egg-shaped, fleshy, spreading, three-lobed, acute, nearly as long as the calyx. Nectary a lip without a spur, deeply three-lobed, slightly tumid at the base beneath, rather longer than the petals and similar to them. Anthers roundish, of two cells, close together, over the stigma. Germen oblong, twisted, furrowed. Style short and thick. Stigma a moist cavity in front. Capsule oblong, triangular, nearly straight. Seeds very numerous.

H. monórchis. Green Musk-Orchis, or *Tway-blade.* Root-leaves two, lance-shaped.——Root of several woolly fibres, and one globular hairy tuber: stem about six inches high: spike dense: flowers small, numerous, greenish-yellow, with a musky smell. Perennial: flowers in July: grows in dry pastures in the south of England. *Engl. Bot.* vol. i. pl. 71: *Ophrys monórchis. Engl. Fl.* vol. iv. p. 27.

4. OPHRYS.

Calyx superior, of three oblong, ribbed, equal, spreading leaves. Petals two, narrow-oblong, smaller than the calyx, spreading, undivided. Nectary a lip without a spur, longer than the calyx, convex above, concave beneath, variously lobed. Anthers oblong, of two parallel cells, close together over the stigma. Germen oblong, furrowed, curved. Style short and thick, channelled in front. Stigma a moist cavity under the anther. Capsule oblong, obtuse, angular. Seeds very numerous, minute.

O. muscífera. Fly Orchis. Lip twice the length of the calyx, with four expanded lobes, somewhat downy; petals linear; style obtuse. ——Stem about a foot high. Spike thin, of about six flowers which bear a strong resemblance to flies: calyx green: petals dark red: lip with a pale blue spot in the middle. Perennial: flowers in June: grows in pastures and meadows, in England; rare. *Engl. Bot.* vol. i. pl. 64. *Engl. Fl.* vol. iv. p. 23.

O. apífera. Bee Orchis. Lip as long as the calyx, with five reflected marginal lobes, the terminal lobe awl-shaped, the rest hairy above:

calyx coloured; style with a hooked point.——Stem about a foot high. Spike thin: calyx rose-coloured: petals greenish: lip dark brown spotted with yellow. Perennial: flowers in April: grows in dry pastures in the south of England; rare. *Engl. Bot.* vol. vi. pl. 383. *Engl. Fl.* vol. iv. p. 30.

O. arantifera. Spider Orchis. Lip as long as the calyx, roundish, hairy, with four shallow, reflected, marginal lobes; style acute, incurved; petals linear, smooth.——Stem about six inches high: spike few-flowered: calyx and petals green; lip dark brown. Perennial: flowers in April: grows in dry pastures in the south of England: rare. *Engl. Bot.* vol. i. pl. 65. *Engl. Fl.* vol. iv. p. 31.

O. fucifera. Drone Orchis. Lip longer than the calyx, inversely egg-shaped, hairy, undivided, with a spreading waved margin; style bluntly pointed, incurved.——Spike three-flowered. Perennial: flowers in May and June. Found in Kent by Mr. E. Barnard and Mr. T. F. Forster. *Engl. Fl.* vol. iv. p. 32.

5. GOODYE'RA.

Calyx superior, of three egg-shaped, spreading, permanent, coloured leaves, the two lateral ones somewhat dilated at the outer margin, and meeting under the nectary. Petals two, half-ovate, erect, converging. Nectary spurless, as long as the petals, prominent, inflated and inversely egg-shaped beneath, terminating above in an oblong, acute point. Anther roundish, parallel to the stigma, of two parallel cells close together. Germen inversely egg-shaped, angular, incurved. Style short. Stigma prominent, pointed. Capsule nearly elliptical, angular. Seeds minute.

G. repens. Creeping Goodyera. Leaves egg-shaped; spike spiral; lip and petals lance-shaped.——Root creeping: stem about six inches high: spike spiral, the flowers inclining one way, pale green, with a sweet scent. Perennial: flowers in July: grows in woods in the north of Scotland. *Engl. Bot.* vol. v. pl. 289: *Satyrium repens. Engl. Fl.* vol. iv. p. 33.

6. NEOTTIA.

Calyx superior, of three egg-shaped, converging, permanent, coloured leaves. Petals two, oblong, erect, converging under the upper leaf of the calyx. Nectary spurless, as long as the calyx, prominent, oblong, bluntish, keeled beneath. Anther roundish, parallel to the stigma, of two cells close together. Germen inversely egg-shaped, with three furrows. Style short, thick, cylindrical. Stigma prominent, globose, with two points. Capsule inversely egg-shaped, with three furrows. Seeds very minute.

N. spiralis. Ladies-traces. Leaves egg-shaped, stalked; spike twisted, the flowers pointing one way; bracteas downy, tumid; lip egg-shaped, entire.——Leaves all radical: stalk about four inches high: flowers small, white, highly fragrant. Perennial: flowers in August and September: grows in pastures and meadows, in various

parts of England. *Engl. Bot.* vol. viii. pl. 541: *Ophrys spiralis. Engl. Fl.* vol. iv. p. 35.

7. LISTERA.

Calyx superior, of three egg-shaped, spreading, permanent leaves. Petals two, lance-shaped, spreading, nearly as long as the calyx. Nectaries spurless, much longer than the petals, two- or four-lobed, the disk with a longitudinal central furrow. Anther oblong, parallel to the stigma, of two close, parallel, linear cells. Germen roundish, angular. Style cylindrical, very short. Stigma of two unequal flat lips, the lower rounded, very short. Capsule oblong, obtuse, ribbed. Seeds minute.

L. ovâta. Common Tway-blade. Leaves elliptical, opposite; nectary with two linear lobes.——Root of numerous long, cylindrical, smooth radicles, connected in bundles by one common fibre: stems from one to two feet high, bearing two sessile leaves: spike clustered, of numerous green flowers. Perennial: flowers in June: grows in woods and pastures. *Engl. Bot.* vol. xxii. pl. 1548. *Engl. Fl.* vol. iv. p. 37.

L. cordâta. Heart-leaved Mountain Tway-blade. Leaves heart-shaped, opposite; nectary four-lobed.——Root of a few long fibres: stem three or four inches high: only two leaves on the stem: spike of a few small, green flowers. Perennial: flowers in July: grows in woods and on moors, in the north of England and in Scotland. *Engl. Bot.* vol. v. pl. 358: *Ophrys cordata. Engl. Fl.* vol. iv. p. 38.

L. Nidus-avis. Bird's-Nest Listera. Stem leafless, clothed with sheathing scales; nectary with two spreading lobes.——Root of very numerous, tufted, cylindrical fibres: stem about a foot high: no leaves: flowers pale brown. Perennial: flowers in May and June: grows in shady woods, among dead leaves. *Engl. Bot.* vol. i. pl. 48. *Engl. Fl.* vol. iv. p. 39.

8. EPIPA'CTIS.

Calyx superior, of three egg-shaped, acute, permanent leaves. Petals two, egg-shaped, spreading as long as the calyx. Nectary scarcely spurred, not longer than the petals, concave at the base, contracted in the middle, undivided at the end. Anther terminating the style, fixed, of two close parallel cells. Germen oblong, angular. Style incurved. Stigma close under the anther, prominent, angular, undivided. Capsule oblong, angular. Seeds small, roundish.

E. latifólia. Broad-leaved Helleborine. Leaves egg-shaped, embracing the stem; flowers drooping; lower bracteas longer than the flowers; lip shorter than the calyx, entire, with a minute point.——Root creeping: stem from one to two feet high: leaves becoming gradually narrower as they ascend. Spike long, loose, greenish-purple. Perennial: flowers in July and August: grows in woods and pastures. *Engl. Bot.* vol. iv. pl. 269: *Serapias latifolia. Engl. Fl.* vol. iv. p. 40.

E. palústris. Marsh Helleborine. Leaves lance-shaped, embrac-

ing the stem; flowers drooping; lip rounded, obtuse, crenate, as long as the petals, with a notched protuberance on the disk.——Root creeping: stem about a foot high: flowers few, whitish, tinged with crimson, forming a loose egg-shaped spike. Perennial: flowers in July and August: grows in wet meadows and marshes; rare. *Engl. Bot.* vol. iv. pl. 270. *Serapias palustris. Engl. Fl.* vol. iv. p. 42.

E. grandiflóra. Large White Helleborine. Leaves lance-shaped, inclining to elliptical; bracteas longer than the germen; flowers sessile, erect; lip abrupt, shorter than the calyx, with elevated lines on the disk.——Root creeping: stem a foot high: flowers large, white. Perennial: flowers in June: grows in woods; rare. *Engl. Bot.* vol. iv. pl. 271: *Serapias grandiflora. Engl. Fl.* vol. iv. p. 43.

E. ensifólia. Narrow-leaved White Helleborine. Leaves lance-shaped, pointed; bracteas much shorter than the germen; flowers sessile, erect; lip abrupt, half the length of the calyx, with elevated lines on the disk.——Root creeping: stem more than a foot high: flowers large, white. Perennial: flowers in May and June: grows in mountainous woods; rare. *Engl. Bot.* vol. vii. pl. 494: *Serapias ensifolia. Engl. Fl.* vol. iv. p. 44.

E. rúbra. Purple Helleborine. Leaves lance-shaped; bracteas longer than the germen; flowers sessile, erect; lip tapering to a point, with elevated undulating lines on the disk.——Root creeping: stem above a foot high: flowers large, rose-coloured, in a loose spike. Perennial: flowers in May and June: grows in woods; very rare: Gloucestershire, and Methven woods in Perthshire. *Engl. Bot.* vol. vii. pl. 437: *Serapias rubra. Engl. Fl.* vol. iv. p. 45.

9. MALA'XIS.

Calyx superior, of three oblong, spreading, permanent leaves. Petals two, spreading, oblong, smaller than the calyx. Nectary spurless, variously shaped. Anther terminal, hemispherical, deciduous, of two close cells. Germen inversely egg-shaped, angular. Style convex at the back, flat or concave in front. Stigma close beneath the anther in front. Capsule oblong, ribbed. Seeds numerous, minute.

M. paludósa. Least Bog-orchis. Marsh Tway blade. Leaves about four, egg-shaped, rough at the extremity; stalk five-cornered; lip entire, concave, acute, half the length of the calyx.——Roots bulbous, egg-shaped: stem from three to five inches high: spike long, slender, of small greenish flowers. Perennial: flowers in July: grows in spongy bogs. *Engl. Bot.* vol. i. pl. 72. *Engl. Fl.* vol. iv. p. 47.

M. Lœselii. Two-leaved Bog-orchis. Leaves two, narrow, elliptical; stalk three-cornered; lip inversely egg-shaped, channelled, entire, recurved, longer than the calyx.——Bulb egg-shaped, greenish: spike few-flowered: flowers pale yellow. Perennial: flowers in July: grows in sandy bogs, in the south of England; rare. *Engl. Bot.* vol. i. pl. 47: *Ophrys Lœselii. Engl. Fl.* vol. iv. p. 48.

10. CORALLORHI'ZA.

Calyx superior, of three lance-shaped, spreading, permanent leaves. Petals two, oblong, ascending, nearly as long as the calyx. Nectary

with a spur, the lip three-lobed, rather shorter than the calyx. Anther terminal, hemispherical, two-celled. Germen oblong. Style incurved, shorter than the petals, convex behind, channelled before. Stigma obsolete, beneath the anther. Capsule oblong. Seeds numerous, extremely minute.

C. innáta. Spurless Coral-root. Spur of the nectary short, not distinct from the lip.——Root of numerous compound branches, of a pale brown colour, resembling coral in its mode of ramification: no leaves: stalk about five inches high: spike of from five to ten pale yellowish flowers. Perennial: flowers in May and June: grows in marshy places in Scotland; rare. Near the head of Little Loch Broom, in Ross-shire; Methven Wood, near Perth; Ravelrig Bog, and bog to the south of Dalmahoy-hill, near Edinburgh. *Engl. Bot.* vol. xx. pl. 1547: *Ophrys Corallorrhiza. Engl. Fl.* vol. iv. p. 49.

DIANDRIA.

11. CYPRIPE'DIUM.

Calyx superior, of three lance-shaped, spreading, coloured leaves. the upper one broadest. Petals two, about the same length, spreading, narrow lance-shaped. Nectary spurless, with an inflated, obtuse, prominent lip, having an irregular longitudinal fissure above. Filaments two on the style, lateral, oblong. Anthers lateral, elliptical. Germen oblong, triangular. Style short, somewhat compressed, terminating above the stamens in a dilated lobe. Stigma beneath this lobe, and parallel to it, dilated and flattened. Capsule oblong, angular. Seeds oblong, numerous.

C. Calcéolus. Common Ladies'-slipper. Stem leafy; terminal lobe of the style elliptical, obtuse, channelled; lip somewhat compressed, shorter than the petals.——Root tuberous, branching: stem a foot high: flower solitary, terminal, large, dark-brown. Perennial: flowers in June: grows in woods: has been found in a few places in the north of England only. *Engl. Bot.* vol. i. pl. 1. *Engl. Fl.* vol. iv. p. 51.

HEXANDRIA.

12. ARISTOLO'CHIA.

Calyx superior, of one leaf, tubular, coloured, permanent; nearly globose at the base, with the limb dilated. Corolla none. Filaments none. Anthers six, sessile on the outer surface of a notched cup, crowning the germen, two-celled, each cell two-valved. Germen inferior, oblong, angular. Style very short. Stigma nearly globular, six-lobed, the summit concave. Capsule large, oval, six-cornered, six-celled, six-valved. Seeds numerous in each cell, triangular.

A. Clematitis. Common Birthwort. Leaves heart-shaped; stem erect; flowers aggregate, erect.——Roots long, slender: stems about two feet high, erect, zig-zag, leafy, unbranched: flowers, several from the bosom of each leaf, on simple stalks, pale yellow. Perennial: flowers in July and August: grows in woods and thickets, and among ruins in England. *Engl. Bot.* vol. vi. pl. 398. *Engl. Fl.* vol. iv. p. 53.

Class XXI. MONŒCIA.

Plants having Flowers furnished with Stamens only, and Flowers furnished with Pistils only, on the same individual.

Order I. MONANDRIA. *One Stamen.*

1. EUPHO'RBIA. *Involucre* with numerous *barren* or *stameniferous* flowers, and one *fertile* or *pistilliferous*.
   Barren flower. *Calyx* none. *Corolla* none.
   Fertile flower. *Calyx* none. *Corolla* none. *Capsule* three-lobed, *Styles* three-cleft.
2. ZANNICHEL'LIA. *Involucre* none.
   Barren flower. *Calyx* none. *Corolla* none.
   Fertile flower. *Calyx* of one leaf. *Corolla* none. *Germens* four or more. *Seeds* four, stalked.

(Callitriche. Typha minor.)

Order II. DIANDRIA. *Two Stamens.*

(Carex pulicaris, stellulata, and other species.)

Order III. TRIANDRIA. *Three Stamens.*

4. SPARGA'NIUM. *Flowers* in globular heads.
   Barren flower. *Calyx* three-leaved. *Corolla* none.
   Fertile flower. *Calyx* three-leaved. *Corolla* none. *Drupe* dry.
5. CA'REX. *Flowers* in imbricated catkins.
   Barren flower. *Calyx* a chaff-scale. *Corolla* none.
   Fertile flower. *Calyx* a chaff-scale. *Corolla* a husk, investing the loose *seed*.
6. KOBRE'SIA. *Flowers* in imbricated, two-rowed catkins.
   Barren flower. *Calyx* a chaff-scale. *Corolla* none.
   Fertile flwer. *Calyx* a chaff-scale. *Corolla* none. *Seed* one, loose.
3. TY'PHA. *Flowers* in a cylindrical, hairy catkin.
   Barren flower. *Calyx* none. *Corolla* none. *Anthers* three on each filament.
   Fertile flower. *Calyx* none. *Corolla* none. *Seed* one, on a hairy stalk.

(Amaranthus.)

Order IV. TETRANDIA. *Four Stamens.*

11. ERIOCAU'LON. *Flowers* in a compact scaly head.
Barren flower, in the middle. *Calyx* none. *Corolla* of one petal, with four or six segments. *Stamens* four or six.
Fertile flower, in the circumference. *Petals* four or six. *Style* one. *Capsule* superior, two or three-lobed. *Seeds* solitary.

7. LITTORE'LLA. *Barren flower*. *Calyx* four-leaved. *Corolla* with four segments. *Stamens* hair-like, very long.
Fertile flower. *Calyx* none. *Corolla* unequally three-cleft. *Style* very long. *Nut* one-celled.

10. U'RTICA. *Barren flower*. *Calyx* four-leaved. *Corolla* none. *Nectary* central, cup-shaped. *Stamens* as long as the calyx.
Fertile flower. *Calyx* two-leaved. *Corolla* none. *Seed* one, superior, polished.

9. BU'XUS. *Barren flower*. *Calyx* three-leaved. *Petals* two. Rudiment of a germen.
Fertile flower. *Calyx* four-leaved. *Petals* three. *Styles* three. *Capsule* three-celled. *Seeds* two.

8. A'LNUS. *Barren flower*. *Calyx* the scale of a catkin, permanent, three-flowered. *Corolla* deeply four-cleft.
Fertile flower. *Calyx* the scale of a catkin, permanent, two-flowered. *Corolla* none. *Style* two. *Nut* compressed, without wings.
(*Myrica.*)

Order V. PENTANDRIA. *Five Stamens.*

12. XA'NTHIUM. *Barren flower*. *Common calyx* imbricated, many-flowered, with intermediate scales. *Corolla* of one petal, funnel-shaped, five-cleft.
Fertile flower. *Calyx* of two leaves, with two flowers. *Corolla* none. *Drupe* coated with the prickly calyx. *Nut* two-celled.

13. AMARA'NTHUS. *Barren flower*. *Calyx* of three or five leaves. *Corolla* none. *Stamens* three or five.
Fertile flower. *Calyx* of three or five leaves. *Corolla* none. *Styles* three or two. *Capsule* one-celled. *Seed* one.

14. BRYO'NIA. *Barren flower*. *Calyx* five-toothed. *Corolla* five-cleft. *Filaments* three. *Anthers* five.
Fertile flower. *Calyx* five-toothed, deciduous. *Corolla* five-cleft. *Style* three-cleft. *Berry* inferior. *Seeds* few.
(*Fagus. Quercus. Atriplex.*)

Order VI. POLYANDRIA. *More than Five Stamens.*

16. MYRIOPHY'LLUM. *Barren flowers*. *Calyx* four-leaved. *Petals* four. *Stamens* eight.
Fertile flowers. *Calyx* four-leaved. *Petals* four. *Stigmas* four, sessile. *Drupes* four.

19. POTE'RIUM. *Barren flowers*. *Calyx* three-leaved. *Corolla* deeply four-cleft. *Stamens* from thirty to fifty.
Fertile flowers. *Calyx* three-leaved. *Corolla* deeply four-cleft. *Pistils* two. *Nut* two-celled.

17. SAGITTA'RIA. Barren flowers. Calyx three-leaved. *Petals* three. *Stamens* about twenty-four.

Fertile flowers. *Calyx* three-leaved. *Petals* three. *Pistils* numerous. *Seeds* numerous, bordered.

15. CERATOPHY'LLUM. *Barren flowers.* *Calyx* many-cleft. *Corolla* none. *Stamens* from sixteen to twenty.
Fertile flowers. *Calyx* many-cleft. *Corolla* none. *Stigma* sessile, oblique. *Drupe* compresed.

21. FA'GUS. *Barren flowers* in a catkin. *Calyx* with several segments. *Corolla* none. *Stamens* from five to twenty.
Fertile flowers. *Calyx* double; the outer inferior, prickly, deeply divided into several segments, two or three-flowered; the inner superior, five or six-cleft. *Corolla* none. *Styles* five or six. *Nuts* two or three, invested by the enlarged outer calyx.

20. QUE'RCUS. *Barren Flowers* in a loose *catkin.* *Calyx* divided into several segments. *Corolla* none. *Stamens* eight or more.
Fertile flowers. *Calyx* double; the outer inferior, scaly, undivided; the inner superior, with six deep segments. *Corolla* none. *Style* one. *Nut* solitary, closely invested at its base with the hemispherical outer calyx.

24. CO'RYLUS. *Barren flowers* in a cylindrical *catkin.* *Calyx* a three-cleft scale. *Corolla* none. *Stamens* eight or more.
Fertile flowers. *Calyx* double; the outer inferior, divided; the inner superior, minute. *Corolla* none. *Styles* two. *Nut* solitary, hard, invested by the enlarged, leathery outer calyx.

23. CARPI'NUS. *Barren flowers* in a cylindrical *catkin.* *Calyx* a rounded scale. *Corolla* none. *Stamens* ten or more.
Fertile flowers. *Calyx* double; the outer inferior, of several deciduous scales; the inner superior, with three deep, egg-shaped, acute, permanent segments. *Corolla* none. *Styles* two. *Nut* egg-shaped, angular, naked.

22. BETULA. *Barren flowers* in a cylindrical *catkin.* *Calyx* a ternate scale. *Corolla* none. *Stamens* ten or twelve.
Fertile flowers in an oblong *catkin.* *Calyx* a three-lobed, three-flowered scale. *Corolla* none. *Styles* two. *Nut* winged, deciduous.

18. A'RUM. *Common calyx* a sheath inclosing a common stalk, naked above. *Corolla* none.
Barren flowers. *Stamens* numerous, in a dense ring, surmounted by a ring of abortive filaments.
Fertile flowers. *Germens* numerous, in a dense ring beneath the stamens, sessile. *Styles* none. *Stigmas* downy. *Berry* one-celled, with several *seeds.*

Order VI. MONADELPHIA. *Filaments united.*

25. PI'NUS. *Barren flowers* in a *catkin*, naked. *Stamens* numerous, on a common stalk.
Fertile flowers in a *catkin* of imbricated, close, stiff, two-flowered scales. *Seeds* two to each scale, winged.

MONŒCIA.—MONANDRIA.

1. EUPHO'RBIA.

Involucre of one leaf, with four or five marginal lobes, permanent, containing *several* barren flowers, and one central fertile flower, all

destitute of calyx and corolla. Nectaries four or five, fleshy, tumid, abrupt, coloured.

Barren flower. Filament simple, hair-like, erect. Anther of two globular separate lobes.

Fertile flower. Germen roundish, three-lobed. Styles three, equal, cleft, spreading, permanent. Stigmas bluntish. Capsule roundish, three-lobed, three-celled. Seeds one in each cell, large, roundish;

* *Stem forked.*

E. Péplis. Purple Spurge. Leaves half-heart-shaped; involucres solitary, axillar; stems procumbent; capsule smooth.——Stems about six inches long, purplish: leaves opposite, on short stalks: flowers solitary, small, from the forks of the stem: nectaries four, rounded. Annual: flowers from June to September: grows on the sandy coasts of Devonshire and Cornwall. *Engl. Bot.* vol. xxviii. pl. 2002. *Engl. Fl.* vol. iv. p. 59.

** *Umbel of three rays.*

E. Péplus. Petty spurge. Umbel three-rayed, forked; bracteas egg-shaped; leaves inversely egg-shaped, stalked; nectaries crescent-shaped.——Six or eight inches high, pale green: umbel large. Annual: flowers in July and August: grows in loose soil, in corn-fields, gardens, &c.; common. *Engl. Bot.* vol. xiv. pl. 959. *Engl. Fl.* vol. iv. p. 60.

E. exígua. Dwarf Spurge. Umbel three-rayed, forked; bracteas lance-shaped; leaves between linear and lance-shaped; nectaries horned.——From three to six inches high: flowers small. Annual: flowers in July: grows in corn-fields and loose soil. *Engl. Bot.* vol. xix. pl. 1336. *Engl. Fl.* vol. iv. p. 61.

*** *Umbel of four rays.*

E. Láthyris. Caper Spurge. Umbel four-rayed, forked; leaves in four rows, opposite, sessile, entire, heart-shaped at the base.—— Stem two or three feet high, smooth, purplish; bracteas heart-shaped. Biennial: flowers in June and July: grows in thickets: found by Dr. Beck about Ufton, near Reading, Berks; and by Dr. Sapper on the Steep Holmes in the Severn. *Engl. Bot.* vol. xxxii. pl. 2255. *Engl. Fl.* vol. iv. p. 61.

**** *Umbel of five rays.*

E. helioscópia. Sun Spurge. Wart-wort. Umbel of five forked rays: bracteas and leaves inversely heart-shaped, serrate; nectaries four, undivided; capsule smooth.——From six inches to a foot high. Annual: grows in corn-fields and gardens; common: flowers from June to October. Like others of the genus, this species abounds with an acrid milk, which is used for destroying warts. *Engl. Bot.* vol. xiii. pl. 883. *Engl. Fl.* vol. iv. p. 63.

D. portlándica. Portland Spurge. Umbel five-rayed, forked; bracteas somewhat heart-shaped concave; leaves oblong, pointed, smooth; nectaries four, undivided; capsules rough at the corner.——Stems about a foot high, ascending: rays of the umbel repeatedly forked. Perennial: flowers in August: grows on the sea-coast in the south of England. *Engl. Bot.* vol. vii. pl. 441. *Engl. Fl.* vol. iv. p. 62.

E. paralia. Sea Spurge. Umbel about five-rayed, branched;

bracteas broadly heart-shaped; leaves oblong, imbricated upwards; nectaries five; capsule nearly smooth.——Stem about a foot high, with very numerous leaves. Perennial: flowers in August and September: grows in sand on the sea-shore; not common. *Engl. Bot.* vol. iii. pl. 195. *Engl. Fl.* vol. iv. p. 63.

E. stricta. Upright Warty Spurge. Umbel of about five forked rays; leaves lance-shaped, finely serrate; nectaries four, rounded, entire; capsule warty.——Stem erect, about a foot high, with numerous leaves above. Annual: flowers in July and August: grows in corn-fields, in England; rare. *Engl. Bot.* vol. v. pl. 333. *Engl. Fl.* vol. iv. p. 64.

***** *Umbel of six or more rays.*

E. Esula. Leafy-branched Spurge. Umbel of numerous forked rays; bracteas somewhat heart-shaped; leaves linear, somewhat inversely egg-shaped, uniform; nectaries diamond-shaped; with two lateral horns; capsule smooth.——Stems a foot and a half high; leaves numerous. Perennial: flowers in July: grows in woods; rare. At Abercorn, Gladsmuir-kirk and West Pilton, near Edinburgh. *Engl. Bot.* vol. xx. pl. 1399. *Engl. Fl.* vol. iv. p. 65.

E. Cyparissias. Cypress Spurge. Umbel of numerous forked rays; bracteas somewhat heart-shaped; stem-leaves lance-shaped; those of the branches linear; nectaries crescent-shaped; capsule smooth.——Stem about a foot high. Perennial: flowers in June and July: grows in woods and the borders of fields; rare. *Engl. Bot.* vol. xii. pl. 840. *Engl. Fl.* vol. iv. p. 66.

E. hibérna. Irish Spurge. Umbel of six forked rays; bracteas egg-shaped; leaves inversely egg-shaped; stem simple; nectaries kidney-shaped; capsule warty.——Stem nearly two feet high. Perennial: flowers in June: found in Kent by Mr. Hudson. The bruised root is said to be used in Ireland for poisoning fish. Quicksilver has the same effect. *Engl. Bot.* vol. xix. pl. 1337. *Engl. Fl.* vol. iv. p. 67.

E. amygdaloides. Wood Spurge. Umbel of about six forked rays, with numerous axillar stalks beneath; bracteas rounded, perfoliate; leaves oblong, hairy; capsule smooth.——The whole plant downy. Perennial: flowers in March and April: grows in woods and thickets. *Engl. Bot.* vol. iv. pl. 256. *Engl. Fl.* vol. iv. p. 68.

E. Chartácias. Red Shrubby Spurge. Umbel of numerous forked rays, with numerous axillar crowded stalks beneath; bracteas heart-shaped, downy; capsule hairy; stems three feet high, downy. A shrub: flowers in March and April: found by Mr. Whately, in Needwood Forest, Staffordshire. *Engl. Bot.* vol. vii. pl. 442. *Engl. Fl.* vol. iv. p. 68.

2. ZANNICHE'LLIA.

Barren flower. Calyx none. Corolla none. Filament solitary, sessile, erect. Anther oblong, erect, two or four-celled.

Fertile flower solitary, by the side of the barren flower. Calyx of one small, cleft leaf, inferior. Corolla none. Germens four or five, stalked, oblong, incurved. Style one to each germen. Stigma one,

peltate, egg-shaped, dilated. Capsules stalked, oblong, incurved, one-celled, one-valved, tipped with the permanent style. Seed solitary.

Z. palústris. Common Horned Pondweed. Anther four-celled; stigmas entire.——Stem twelve or eighteen inches long, thread-shaped, branched, floating. Annual: flowers in July: grows in ponds and ditches. *Engl. Bot.* vol. xxvi. pl. 1844. *Engl. Fl.* vol. iv. p. 70.

TRIANDRIA.

3. TY'PHA.

Barren flowers numerous, arranged in a dense, cylindrical, hairy, terminal catkin, the common stalk of which is hairy or scaly. Calyx none. Corolla none. Anthers about three, oblong, furrowed, drooping, placed on a common filament.

Fertile flowers numerous, in the lower part of the same catkin. Calyx none. Corolla none. Germen superior, oblong, stalked. Style hair-like. Stigma simple. Seed solitary, egg-shaped, on a bristly stalk.

T. latifólia. Great Cat's-tail or *Reed-mace.* Leaves linear, somewhat convex beneath; catkin continuous, its common stalk hairy.—— Stems about six feet high, erect, round, leafy at the bottom: catkin about a foot long, brown. Perennial: flowers in July: grows in the borders of ponds, lakes, and rivers. *Engl. Bot.* vol. xxi. pl. 1455. *Engl. Fl.* vol. iv. p. 71.

T. angustifólia. Lesser Cat's-tail or *Reed-mace.* Leaves linear, convex beneath, channelled above; barren and fertile catkins separated from each other, the common stalk scaly.——Stems about four feet high. Perennial: flowers in June and July: grows in pools and ditches; rare. *Engl. Bot.* vol. xxi. pl. 1456. *Engl. Fl.* vol. iv. p. 72.

T. minor. Dwarf Cat's-tail or *Reed-mace.* Leaves linear, convex beneath; barren and fertile catkins a little distant; the common stalk naked.——Stem about a foot high, very slender: leaves as long as the stem. Perennial: flowers in July: grows in marshes; very rare. *Engl. Bot.* vol. xxi. pl. 1457. *Engl. Fl.* vol. iv. p. 73.

4. SPARGA'NIUM.

Flowers arranged in several dense heads.

Barren flowers numerous, in one or more superior heads. Calyx of three or more oblong, equal, deciduous leaves. Corolla none. Filaments three, hair-like, erect, longer than the calyx. Anthers roundish, two-celled.

Fertile flowers numerous, in dense heads under the former. Calyx of three or more oblong, equal, deciduous leaves. Corolla none. Germen superior, egg-shaped. Stigma awl-shaped or egg-shaped, oblique, downy on one side, permanent. Drupe inversely egg-shaped, beaked, dry, one-celled. Nut solitary, egg-shaped.

S. ramósum. Branched Bur-reed. Leaves triangular at the base, their sides concave; common flower-stalks branched; stigma awl-shaped.——Stem erect, from two to three feet high. Perennial: flowers in July and August: grows in ditches and by the sides of lakes and pools. *Engl. Bot.* vol. xi. pl. 744. *Engl. Fl.* vol. iv. p. 74.

S. simplex. Unbranched Bur-reed. Leaves triangular at the base, with the sides nearly flat: common flower-stalk unbranched; stigma linear.——Stem erect, about two feet high. Perennial: flowers in July and August: grows in ditches, and by the sides of lakes and pools. *Engl. Bot.* vol. xi. pl. 745. *Engl. Fl.* vol. iv. p. 75.

S. nátans. Floating Bur-reed. Leaves floating, flat; common flower-stalk unbranched; stigma egg-shaped, very short.——Stem a few inches above the water. Perennial: flowers in July: grows in pools, lakes, and rivers; common in Scotland. *Engl. Bot.* vol. iv. pl. 273. *Engl. Fl.* vol. iv. p. 75.

5. CA'REX.

Barren flowers numerous, arranged in one or more, oblong, dense catkins, with scales imbricated all round. Calyx a lance-shaped permanent chaff-scale. Corolla none. Filaments three, hair-like, longer than the scales. Anthers linear, two-celled.

Fertile flowers numerous, arranged in one or more, oblong, dense catkins. Calyx a lance-shaped chaff-scale. Corolla a compressed, ribbed, permanent husk. Germen superior, roundish, three-cornered, smooth. Style one, terminal, cylindrical, short. Stigmas three, awl-shaped, long, downy, deciduous. Seed roundish, three-cornered, loosely covered by the enlarged husk.

* *Catkin solitary, simple.*

C. dioica. Creeping dicecious Carex. Catkins simple, dicecious; fruit egg-shaped, ascending, pointed, striated, rough at the edges; root creeping.——Four or five inches high: leaves keeled: scales of the catkins brown, with a green rib and white edges. Perennial: flowers in May and June: grows in boggy places; not uncommon. *Engl. Bot.* vol. viii. pl. 543. *Engl. Fl.* vol. iv. p. 77.

C. Davalliana. Prickly dicecious Carex. Catkins simple, dicecious; fruit lance-shaped, deflected, beaked, ribbed, rough-edged near the top; root tufted.——Five or six inches high. Perennial: flowers in May and June: grows in marshy places; rare. *Engl. Bot.* vol. xxx. pl. 2123. *Engl. Fl.* vol. iv. p. 78.

C. pulicaris. Flea Carex. Catkin simple; flowers of the upper half barren, of the lower fertile; fruit deflected, polished, tapering at both ends; stigmas two.——Straws from four to twelve inches high, slender, smooth. Perennial: flowers in June: grows in boggy places; common. *Engl. Bot.* vol. xv. pl. 1051. *Engl. Fl.* vol. iv. p. 76.

C. pauciflora. Few-flowered Carex. Catkins simple, loose, few-flowered, the uppermost flowers barren; fruit deflected, awl-shaped, smooth; stigmas three.——From four to eight inches high, erect,

furrowed; fruit pale reddish. Perennial: flowers in June: grows in boggy places; rare. Goatfell; Ben Nevis; Ben Lomond; Hill of Fare, Aberdeenshire; near Crag Lake, Northumberland. *Engl. Bot.* vol. xxix. pl. 2041. *Engl. Fl.* vol. iv. p. 79.

** *Catkins or Spikelets aggregate, each composed of barren flowers and fertile flowers. Stigmas two.*

C. stellulàta. Little prickly Carex. Spikelets three or four, roundish, rather distant; barren flowers inferior; fruit spreading, egg-shaped, with a flat beak, rough at the edges. Straw about eight inches high, triangular, with roughish edges: fruit brown. Perennial: flowers in May and June: grows in boggy heaths and meadows; common. *Engl. Bot.* vol. xii. pl. 806. *Engl. Fl.* vol. iv. p. 80.

C. cùrta. White Carex. Spikelets about six, elliptical, somewhat distant; scales egg-shaped, membranous, small; fruit broadly egg-shaped, tumid, smooth.——Straw a foot high, three-cornered, rough at the upper part, spikelets silvery. Perennial: flowers in June: grows in watery places; not common. *Engl. Bot.* vol. xx. pl. 1386. *Engl. Fl.* vol. iv. p. 81.

C. elongàta. Elongated Carex. Spikelets numerous, oblong, rather distant, without bracteas; fruit between oblong and egg-shaped, tapering, cleft, ribbed, recurved, longer than the scales.——Straw about a foot high; spikelets variegated with brown and green. Perennial: flowers in June: grows in marshes; rare: found by Mr. J. Salt at Aldwark, near Sheffield. *Engl. Fl.* vol. iv. p. 82.

C. ovàlis. Oval-spiked Carex. Spikelets about six, oval, close together; barren flowers inferior; fruit lance-shaped, rough-edged, striated, as long as the lance-shaped scales.——Straw from twelve to eighteen inches high, with rough corners: spikelets greyish, each with a large egg-shaped scale at the base, the lowest with a bristle-shaped bractea. Perennial: flowers in June: grows in marshy places and wet meadows. *Engl. Bot.* vol. v. pl. 306. *Engl. Fl.* vol. iv. p. 82.

C. remòta. Remote Carex. Spikelets several, nearly sessile, distant from each other; barren flowers inferior; bracteas very long; fruit egg-shaped, obtuse at the edges, the beak slightly cleft.——Straw about a foot high, three-cornered above, with rough edges: spikelets yellowish. Perennial: flowers in May and June: grows in moist shady places. *Engl. Bot.* vol. xii. pl. 832. *Engl. Fl.* vol. iv. p. 84.

C. axillàris. Axillar Clustered Carex. Spikelets several, sessile, distant from each other; the lower ones compound, with very long bracteas: fruit egg-shaped, its beak deeply cleft.——Resembling the last, but larger, with broader leaves. Perennial: flowers in June. Found by Mr. Curtis, near Putney; and at Earsham, in Norfolk, by Mr. Woodward. *Engl. Bot.* vol. xiv. pl. 993. *Engl. Fl.* vol. iv. p. 94.

C. incùrva. Curved Carex. Spikelets crowded into a dense head; fertile flowers inferior; bracteas membranous; stem roundish, smooth, curved; leaves channelled.——Spikelets sessile, egg-shaped, brownish: straw about four inches high. Perennial: flowers in July and August: grows in sand along the coast; not uncommon in the north of Scotland. *Engl. Bot.* vol. xiii. pl. 927. *Engl. Fl.* vol. iv. p. 85.

C. arenária. Sea Carex. Spikelets numerous, crowded into an oblong spike; upper ones barren, lower fertile; bracteas membranous, the lower ones leafy; stem three-cornered; leaves flat.——Root very long, creeping: straw from six inches to a foot high: spikes yellowish. This plant, like the *Arundo arenaria*, tends to fix the loose sand along the coasts. Perennial: flowers in June. *Engl. Bot.* vol. xiii. pl. 928. *Engl. Fl.* vol. iv. p. 85.

C. intermédia. Soft Brown Carex. Spikelets numerous, crowded into an oblong spike; the lower and terminal ones fertile, the intermediate barren; straw erect, three-cornered, rough on the angles. ——Stems erect, about a foot high: spike rusty brown. Perennial: flowers in May and June: grows in marshy places. *Engl. Bot.* vol. xxix. pl. 2042. *Engl. Fl.* vol. iv. p. 86.

C. divisa. Bracteated Marsh Carex. Spike somewhat egg-shaped, once or twice compounded; spikelets with the fertile flowers inferior; bracteas leafy, erect; fruit broadly egg-shaped, acutely angular, with the point cleft; root creeping.——Straws erect, a foot high: spike dark brown, about an inch long. Perennial: flowers in May and June: grows in marshes, chiefly near the sea. *Engl. Bot.* vol. xvi. pl. 1096. *Engl. Fl.* vol. iv. p. 87.

C. muricáta. Greater Prickly Carex. Spike oblong, dense, compound; spikelets with the fertile flowers inferior; fruit spreading, egg-shaped, acutely angular, with a long, rough-edged, cleft beak: root fibrous.——Straws a foot and a half high. Perennial: flowers in May and June: grows in marshes and shady places. *Engl. Bot.* vol. xvi. pl. 1097. *Engl. Fl.* vol. iv. p. 88.

C. divúlsa. Grey Carex. Spike elongated, loose; spikelets of its lower half finally very distant; fruit erect, smooth-edged, with a roughish cleft beak; root fibrous.——Straws twelve or eighteen inches high, acutely three-cornered, rough. Perennial: flowers in May: grows in moist shady pastures. *Engl. Bot.* vol. ix. pl. 629. *Engl. Fl.* vol. iv. p. 89.

C. vulpína. Great Compound Prickly Carex. Spike dense, oblong, obtuse, thrice compound; fruit egg-shaped, acutely angular, spreading, with a rough-edged notched beak; corners of the straw very acute.——Straws two feet high, erect, the sides concave: spikelets egg-shaped, with the barren flowers uppermost. Perennial: flowers in May: grows in wet shady places, and by the edges of rivers and pools. *Engl. Bot.* vol. v. pl. 307. *Engl. Fl.* vol. iv. p. 90.

C. teretiúscula. Lesser Clustered Carex. Spike dense, twice or thrice compounded; spikelets egg-shaped, sterile at their extremity; fruit spreading, tumid at one side, with a tapering serrate beak; straw three-cornered, with convex sides.——Straws twelve or eighteen inches high. Perennial: flowers in May: grows in wet meadows. *Engl. Bot.* vol. xv. pl. 1065. *Engl. Fl.* vol. iv. p. 91.

C. paniculáta. Spike thrice compound, loosely panicled, interrupted, acute; spikelets egg-shaped, sterile at their extremity; fruit spreading, with an abrupt serrate beak; straw acutely three-cornered, with flat sides.——Stem two or three feet high. Perennial: flowers in June: grows in wet meadows and marshy places. *Engl. Bot.* vol. xv. pl. 1064. *Engl. Fl.* vol. iv. p. 92.

*** *Barren flowers and fertile flowers in separate catkins; the barren catkin solitary. Bracteas membranous. Stigmas three.*

C. digitáta. Fingered Carex. Bracteas membranous, sheathing; catkins linear, loose, erect, the barren one shortest; two or three fertile ones; leaves flat.——Straws six or eight inches high, sheathed at the base: leaves rough with reflected teeth towards the base, and smooth in the middle. Perennial: flowers in May: grows in woods and thickets, in England; rare. *Engl. Bot.* vol. ix. pl. 615. *Engl. Fl.* vol. iv. p. 93.

C. clandestína. Dwarf Silvery Carex. Bracteas membranous; fertile catkins distant from each other, few-flowered, inclosed in the sheathing bracteas; leaves channelled.——Straws from one to three inches high: catkins silvery. Perennial: flowers in May: grows on St. Vincent's Rocks, Bristol. *Engl. Bot.* vol. xxx. pl. 2124. *Engl. Fl.* vol. iv. p. 94.

**** *Barren flowers and fertile flowers in separate catkins; the barren catkin solitary. Bracteas leafy. Stigmas three.*

C. péndula. Great Pendulous Carex. Sheaths nearly as long as the flower-stalks; fertile catkins cylindrical, very long, drooping; fruit egg-shaped, with a notched beak, closely imbricated.——Straw from three to six feet high, three-cornered, leafy: catkins six or seven, greenish. Perennial: flowers in May and June: grows in moist shady places. *Engl. Bot.* vol. xxxiii. pl. 2315. *Engl. Fl.* vol. iv. p. 95.

C. strigósa. Loose Pendulous Carex. Sheaths nearly as long as the flower-stalks; catkins slender, loose, slightly drooping; fruit lance-shaped, ribbed, slightly notched, loosely imbricated.——Straw two feet high. Perennial: flowers in May and June: grows in woods and thickets; rare. *Engl. Bot.* vol. xiv. pl. 994. *Engl. Fl.* vol. iv. p. 96.

C. sylvática. Pendulous Wood Carex. Sheaths half as long as the flower-stalks; catkins slender, rather loose, drooping; fruit egg-shaped, with a long, beaked cleft point, ribless, triangular.—Straw two feet high, smooth, three-cornered. Perennial: flowers in May and June: grows in woods; common. *Engl. Bot.* vol. xiv. pl. 995. *Engl. Fl.* vol. iv. p. 96.

C. depauperáta. Starved Wood Carex. Sheaths much shorter than the flower-stalks; fertile catkins distant, erect, of about three flowers; fruit inflated, nearly globular, ribbed, with a notched beak.——Straw about eighteen inches high, obtusely three-cornered, smooth. Perennial: flowers in May and June: grows in dry woods; rare. *Engl. Bot.* vol. xvi. pl. 1098. *Engl. Fl.* vol. iv. p. 97.

C. Mielichóferi. Loose-spiked Rock Carex. Sheaths not half so long as the flower-stalks; fertile catkins about three, distant, loose, erect; fruit egg-shaped, tumid, rough edged, its beak cleft, membranous at the end.——Stems a foot high. Perennial: flowers in August: grows in rocky places on the higher mountains of Scotland. *Engl. Bot.* vol. xxxii. pl. 2293. *Engl. Fl.* vol. iv. p. 98.

C. speirostáchya. Dense short-spiked Carex. Sheaths shorter than the flower-stalks; fertile catkins about three, distant, erect, egg-shaped,

dense, many-flowered; fruit egg-shaped, three-cornered, ribbed, smooth, with a deeply cleft beak, membranous at the end.——Stem about a foot high, three-cornered, smooth. Perennial: flowers in July and August: grows in marshes on the hills of Lanarkshire and Perthshire. *Engl. Fl.* vol. iv. p. 98.

C. phæostáchya. Short-brown-spiked Carex. Sheaths shorter than the flower-stalks; fertile catkins two, distant, egg-shaped, erect; fruit egg-shaped, three-cornered, smooth, with a cleft beak; scales of the barren catkin pointed, of the fertile ones obtuse.——Stem five or six inches high, erect, furrowed, smooth. Perennial: flowers in June: grows in rocky places on the higher mountains of Scotland. *Engl. Fl.* vol. iv. p. 99.

C. capillâris. Dwarf Hair-like Carex. Common sheath much shorter than the drooping, hair-like flower-stalks; fertile catkins egg-shaped, rather loose, pendulous; fruit egg-shaped, three-cornered, pointed, ribless, membranous at the tip; root fibrous.——From two to four inches high. Perennial: flowers in July and August: grows on the higher mountains of Scotland. *Engl. Bot.* vol. xxix. pl. 2069. *Engl. Fl.* vol. iv. p. 100.

C. rariflóra. Loose-flowered Alpine Carex. Sheaths very short, scarcely any; fertile catkins loose, drooping, few-flowered; fruit inversely egg-shaped, slightly pointed, ribless; root creeping.——Straws about six inches high. Perennial: flowers in July: grows at the head of a glen, called the Dell, in the Clova mountains, found there by Mr. G. Don. *Engl. Bot.* vol. xxv. pl. 2516. *Engl. Fl.* vol. iv. p. 100.

C. Pseudo-cypérus. Cyperus-like Carex. Sheaths scarcely any; fertile catkins dense, cylindrical, drooping, many-flowered; scales awl-shaped; fruit lance-shaped, spreading, furrowed, rough-edged, with a deeply cleft beak.——Straw about a foot high, with three sharp, rough corners. Perennial: flowers in June: grows in marshy places, and by rivers and lakes. *Engl. Bot.* vol. iv. pl. 242. *Engl. Fl.* vol. iv. p. 101.

C. limósa. Green and gold Carex. Sheaths scarcely any; fertile catkins egg-shaped, dense, drooping, many-flowered; fruit broadly elliptical, compressed, ribbed, smooth-edged, without a beak; root creeping.——Straws about eight inches high, three-cornered, roughish. Perennial: flowers in July: grows in bogs and marshes. *Engl. Bot.* vol. xxix. pl. 2043. *Engl. Fl.* vol. iv. p. 102.

C. ustuláta. Scorched Alpine Carex. Sheaths very short; fertile catkins egg-shaped, dense, pendulous; fruit elliptical, compressed, rough-edged, with a cleft beak; root tufted, somewhat creeping. Straw three or four inches high. Perennial: flowers in July: grows on the higher mountains of Scotland. *Engl. Bot.* vol. xxxiv. pl. 2404. *Engl. Fl.* vol. iv. p. 103.

C. atráta. Black Carex. Sheaths scarcely any; catkins stalked, egg-shaped, drooping, the terminal one with many barren flowers at the base; fruit elliptical, compressed, smooth, with a notched beak.——Straw about a foot high, three-cornered, smooth; catkins reddish-black. Perennial: flowers in June and July: grows on the higher

mountains of Scotland. *Engl. Bot.* vol. xxix. pl. 2044. *Engl. Fl.* vol. iv. p. 103.

C. pallèscens. Pale Carex. Sheaths scarcely any; fertile catkins cylindrical, stalked, somewhat drooping; fruit inversely egg-shaped, three-cornered, inflated, smooth, with a minute abrupt point.—— Straws a foot or more high, acutely three-cornered; catkins pale green. Perennial: flowers in June: grows in wet meadows and marshy places. *Engl. Bot.* vol. xxxi. pl. 2185. *Engl. Fl.* vol. iv. p. 105.

C. flàva. Yellow Carex. Sheaths short, nearly as long as the flower-stalks; fertile catkins roundish, egg-shaped; fruit three-cornered, smooth, with a long curved beak, notched at the end.—— Stem about a foot high, nearly smooth, catkins yellowish. Perennial: flowers in May and June: grows in bogs and wet meadows; common. *Engl. Bot.* vol. xviii. pl. 1294. *Engl. Fl.* vol. iv. p. 106.

C. fùlva. Tawny Carex. Sheaths elongated, shorter than the flower-stalks; fertile catkins egg-shaped, erect; scales pointless; fruit egg-shaped, three-cornered, smooth, with a straight, rough-edged, cleft beak.——Straw twelve or fifteen inches high, three-cornered, acute and rough above. Perennial: flowers in June and July: grows in boggy places. *Engl. Bot.* vol. xviii. pl. 1295. *Engl. Fl.* vol. iv. p. 107.

C. exténsa. Long-bracteated Carex. Sheaths and flower-stalks very short; bracteas very long and spreading: fertile catkins oblong, near to each other; fruit egg-shaped, three-cornered, with a short, smooth, cleft beak; straw very smooth.——About a foot high: leaves very long, narrow, recurved. Perennial: flowers in June: grows on the sea-coast. *Engl. Bot.* vol. xii. pl. 833. *Engl. Fl.* vol. iv. p. 108.

C. distans. Loose Carex. Sheaths elongated, nearly as long as the flower-stalks; fertile catkins oblong, widely distant; scales pointed; straw smooth.——Twelve or eighteen inches high; leaves lance-shaped, flat. Perennial: flowers in June: grows in marshes and wet meadows. *Engl. Bot.* vol. xviii. pl. 1234. *Engl. Fl.* vol. iv. p. 109.

C. binérvis. Green-ribbed Carex. Sheaths elongated, shorter than the flower-stalks: fertile catkins cylindrical, distant, partly compound; scales pointed; straw smooth; fruit egg-shaped, with a central keel and two distant marginal ribs.——About two feet high; leaves lance-shaped, flat. Perennial: flowers in June: grows on dry heaths. *Engl. Bot.* vol. xviii. pl. 1235. *Engl. Fl.* vol. iv. p. 110.

C. præ'cox. Early Carex. Sheaths very short, about as long as the flower-stalks; catkins elliptical, rather close; scales of the fertile ones pointed; fruit inversely egg-shaped, downy, with an abrupt, entire point.——Straws from three inches to nearly a foot high, three-cornered, smooth: bracteas short, very narrow. Perennial: flowers in April: grows on heaths and in dry pastures; common. *Engl. Bot.* vol. xvi. pl. 1099. *Engl. Fl.* vol. iv. p. 111.

C. pilulífera. Round-headed Carex. Sheaths none; catkins two or three, sessile, crowded, nearly globular; scales pointed; fruit three-cornered, roundish, downy, with a short cleft beak.——Straws about a foot high, slender, curved, three-cornered, rough at the top. Perennial: flowers in May and June: grows on wet heaths; common. *Engl. Bot.* vol. xiii. pl. 885. *Engl. Fl.* vol. iv. p. 112.

C. tomentósa. Larger Downy-fruited Carex. Sheaths hardly any; fertile catkins one or two, nearly sessile, cylindrical, obtuse, with acute scales; fruit globular, slightly three-cornered, covered with close down, and having a short cleft beak.——Straws a foot or more high, erect, three-cornered, rough at the top. Perennial: flowers in June. Found by Mr. R. Teesdale, near Merston Measy, Wiltshire. *Engl. Bot.* vol. xxix. pl. 2046. *Engl. Fl.* vol. iv. p. 113.

C. panicéa. Pink-leaved Carex. Sheaths elongated, about half as long as the flower-stalks: fertile catkins one or two, distant, the lower one rather loose; fruit somewhat globular, smooth, beakless. ——Stem about a foot high, smooth, obtusely three-cornered, erect. Perennial: flowers in June: grows in meadows and marshy places; common. *Engl. Bot.* vol. xxi. pl. 1505. *Engl. Fl.* vol. iv. p. 114.

C. recúrva. Glaucous Heath Carex. Sheaths short, scarcely any; fertile catkins cylindrical, drooping, on very long, recurved stalks; fruit elliptical, three-cornered, roughish, obtuse, slightly notched.—— Straw about a foot high, erect. Perennial: flowers in May and June: grows in moist meadows and heaths; common. *Engl. Bot.* vol. xxi. pl. 1506. *Engl. Fl.* vol. iv. p. 114.

***** *Barren flowers and fertile flowers in separate catkins; the barren catkin solitary; bracteas leafy; stigmas two.*

C. púlla. Russet Carex. Sheaths none; fertile catkins egg-shaped, the lower one stalked; fruit broadly elliptical, with a short notched beak.——Straw six or eight inches high: catkins dark brown. Perennial: flowers in May and June: grows on the higher mountains of Scotland. *Engl. Bot.* vol. xxix. pl. 2045. *Engl. Fl.* vol. iv. p. 104.

C. cæspitósa. Tufted Bog Carex. Sheaths none; fertile catkins cylindrical, obtuse, erect; bracteas lobed at the base; fruit broadly elliptical, flat, ribbed, with a very short abrupt beak.——Straw from six to twelve inches high, three-cornered, rough at the end. Perennial: flowers in May and June: grows in marshy places; common. *Engl. Bot.* vol. xxi. pl. 1507. *Engl. Fl.* vol. iv. p. 117.

C. stricta. Glaucous straight-leaved Carex. Sheaths none; fertile catkins cylindrical, elongated, acute, nearly sessile; bracteas with small lobes at the base; fruit elliptical, flat, with a short cleft beak. ——Straw two feet high, acutely three-cornered, rough at the top: leaves erect, the lower ones torn and reticulated at the base. Perennial: flowers in April and May: grows in marshy places; not uncommon. *Engl. Bot.* vol. xiii. pl. 914. *Engl. Fl.* vol. iv. p. 119.

****** *Barren flowers and fertile flowers in separate catkins. Barren catkins two or more.*

C. acúta. Slender-spiked Carex. Stigmas two; sheaths none; catkins cylindrical, slender; fruit elliptical, with an obtuse, undivided point.——Straws two or three feet high, with rough angles: leaves broad, rough on the edges and keel. Perennial: flowers in May: grows about ditches, pools, and rivers; common. *Engl. Bot.* vol. ix. pl. 580. *Engl. Fl.* vol. iv. p. 119.

C. paludósa. Lesser Common Carex. Sheaths none; bracteas very long, leafy; catkins cylindrical, erect, obtuse, the fertile ones with

long-pointed scales; fruit egg-shaped, three-cornered, compressed, with a notched beak.——Straw two or three feet high, with rough corners: leaves broad, rough on the edges and keel. Perennial: flowers in May: grows in marshes and about the edges of ditches, pools, and rivers; common. *Engl. Bot.* vol. xii. pl. 807. *Engl. Fl.* vol. iv. p. 120.

C. ripária. Great Common Carex. Sheaths none; bracteas very long, leafy; catkins erect, cylindrical, with long-pointed scales; fruit egg-shaped, tumid, with a deeply cleft beak.——Straw three or more feet high, erect, with very rough, sharp corners: leaves broad, erect, rough on the keel and edges. Perennial: flowers in April and May: grows at the edges of pools, ditches, and slow rivers. *Engl. Bot.* vol. ix. pl. 579. *Engl. Fl.* vol. iv. p. 121.

C. lævigáta. Sheaths elongated, shorter than the flower-stalks; catkins cylindrical, fertile ones drooping; scales pointed; fruit egg-shaped, three-cornered, with a cleft beak.——Straws from two to four feet high, three-cornered. Perennial: flowers in June: grows in marshy places. *Eng. Bot.* vol. xx. pl. 1387. *Engl. Fl.* vol. iv. p. 122.

C. vesicária. Large-fruited Bladder Carex. Sheaths none; fertile catkins cylindrical, short, abrupt, on short stalks; scales lance-shaped, acute; fruit inversely egg-shaped, inflated, with a long cleft point.——Straw two feet high, erect, with very sharp rough corners. Perennial: flowers in May: grows in marshes and wet meadows. *Engl. Bot.* vol. xi. pl. 779. *Engl. Fl.* vol. iv. p. 123.

C. ampullácea. Small-fruited Bladder Carex. Sheaths none; fertile catkins cylindrical, elongated, nearly sessile; scales lance-shaped, acute; fruit globular, inflated, with a slender cleft beak.——Straw from one to two feet high, with obtuse corners, rough at the top. Perennial: flowers in May: grows in bogs and marshes; common. *Engl. Bot.* vol. xi. pl. 780. *Engl. Fl.* vol. iv. p. 124.

C. hírta. Hairy Carex. Hairy; sheaths elongated, nearly as long as the flower-stalks; fertile catkins short, cylindrical, distant; scales awned; fruit tumid, hairy, with a deeply cleft beak; straw, rough-edged.——Straw two feet high, the whole plant covered with fine soft hairs. Perennial: flowers in May and June: grows in wet pastures and woods; common. *Engl. Bot.* vol. x. pl. 685. *Engl. Fl.* vol. iv. p. 125.

C. angustifólia. Narrow-leaved Carex. Smooth; sheaths scarcely any; fertile catkins one or two, egg-shaped, stalked; scales obtuse; fruit egg-shaped, compressed, smooth, with a short notched beak.——Straw upwards of a foot high. Perennial: flowers in June: grows in marshes and wet meadows. *Engl. Bot.* vol. xiii. pl. 904. *Engl. Fl.* vol. iv. p. 128.

6. KOBRE'SIA.

Barren flower. Calyx the inner scales of a catkin, each oblong, one-flowered, permanent, sometimes wanting. Corolla none. Filaments three, hair-like, erect, longer than the calyx. Anthers linear, erect, two-celled.

Fertile flower. Calyx the outer scales of the same catkin, rather

larger, involute, sheathing, oblong, one-flowered, permanent. Corolla none. Germen superior, three-cornered. Style one, short, cylindrical. Stigmas three, tapering, spreading, downy. Seed one, loosely covered by the permanent scale, three-cornered, pointed, hard.

K. caricina. *Compound-headed Kobresia*. Catkins crowded, alternate.——Roots fibrous: stems sheathed at the base with the old leaves, erect, striated, from three to five inches high, rough-edged at the top; leaves radical, linear, acute, channelled, rough-edged; catkins four or five, alternate, brown, crowded with an egg-shaped erect spike. Perennial: flowers in August: grows in muddy places on mountains in the north of England. *Engl. Bot.* vol. xx. pl. 1410. *Engl. Fl.* vol. iv. p. 129.

TETRANDRIA.

7. LITTORE'LLA.

Barren Flowers. Calyx of four egg-shaped, acute, erect leaves. Corolla of one petal, tubular, with the limb deeply divided into four equal, egg-shaped, acute segments. Filaments hair-like, very long. Anthers heart-shaped, two-celled.

Fertile Flowers. Calyx none. Corolla of one petal, membranous, permanent, deeply divided into four unequal, acute segments. Germen superior, oblong, very small. Style thread-shaped, very long, erect. Stigma simple, acute. Nut oval, one-celled, not opening. Seed solitary.

L. lacústris. *Plantain Shore-weed*.——Root fibrous: stem none: leaves linear, fleshy, semi-cylindrical, two or three inches long. Perennial; flowers in June: grows about the edges of lakes and pools. *Engl. Bot.* vol. vii. pl. 468. *Engl. Fl.* vol. iv. p. 130.

8. A'LNUS.

Barren Flowers numerous, in a loose cylindrical catkin, imbricated all round. Calyx a wedge-shaped scale, three-flowered, with two very minute lateral scales. Corolla of three equal florets, attached to the inner side of each scale, each of one petal, deeply divided into four equal, egg-shaped, obtuse segments. Filaments four, arising from the tube of the corolla, shorter than its segments. Anthers roundish, two-lobed.

Fertile Flowers fewer, in an oval catkin, imbricated all round. Calyx a wedge-shaped, two-flowered scale. Corolla none. Germen compressed, two-celled. Styles two, parallel, bristle-shaped, deciduous. Stigma simple. Nut egg-shaped, hard, compressed, angular, two-celled. Kernel solitary, egg-shaped, acute.

A. glutinósa. *Common Alder*. Leaves roundish, wedge-shaped, waved, serrate, glutinous, downy at the branching of the veins be-

neath.——A low tree, with rugged bark, and crooked, spreading, smooth branches; barren catkins long, pendulous; fertile ones short, oval. The wood is hard and brittle, of a reddish colour, and lasts long under water. The bark dyes red, and with copperas, black. Grows in wet places, by the sides of rivers: flowers in March. *Engl. Bot.* vol. xxi. pl. 1508: *Betula Alnus. Engl. Fl.* vol. iv. p. 132.

9. BU'XUS.

Barren Flowers. Calyx of three roundish, concave, spreading leaves. Petals two, roundish, concave, spreading. Filaments four, awl-shaped, spreading, about the length of the petals. Anthers two-lobed. A rudiment of a germen.

Fertile Flowers from the same bud. Calyx inferior, of four roundish, concave, spreading, permanent leaves. Petals three, roundish, larger than the calyx. Germen nearly globular, with three obtuse angles or lobes. Styles three, short, thick, permanent. Stigma obtuse, rough. Capsule globular, with three spreading beaks, three-celled, three-valved. Seeds two in each cell, oblong.

B. sempervirens. Common Box-tree. Leaves egg-shaped, convex. ——A small tree, with shining leaves and pale yellow flowers. Its hard, close, yellowish wood is employed in making mathematical instruments, and for wood-engraving. Flowers in April: grows on dry hills in England. *Engl. Bot.* vol. xix. pl. 1341. *Engl. Fl.* vol. iv. p. 133.

10. URTI'CA.

Barren Flower. Calyx of four, roundish, concave, equal leaves. Petals none. Nectary central, cup-shaped. Filaments four, awl-shaped, spreading, as long as the calyx. Anthers roundish, two-lobed.

Fertile Flower. Calyx inferior, of two roundish, equal leaves. Corolla none. Germen egg-shaped. Style none. Stigma downy. Seed one, naked, egg-shaped, somewhat compressed, polished, embraced by the permanent calyx.

U. pilulifera. Roman Nettle. Leaves opposite, egg-shaped, serrate, with transverse ribs; fertile flowers in globular heads.——The whole plant covered with venomous stings. Stem about two feet high. Annual: flowers in June and July: grows in Suffolk, in waste-ground, chiefly near the sea. *Engl. Bot.* pl. 148. *Engl. Fl.* vol. iv. p. 134.

U. úrens. Small Nettle. Leaves opposite, broadly elliptical, with about five longitudinal ribs; clusters nearly simple.——From one to two feet high, bright green, with venomous stings. Annual: flowers from June to October: grows in cultivated ground, and waste places. *Engl. Bot.* vol. xviii. pl. 1236. *Engl. Fl.* vol. iv. p. 134.

U. dioica. Great Nettle. Leaves opposite, heart-shaped; clusters much branched, in pairs, mostly dicecious.——From two to four feet high, dull green, with venomous stings. The fibres of the stem may be used like hemp. The young leaves are boiled along with oatmeal in the Hebrides. *Engl. Bot.* vol. xxv. pl. 1750. *Engl. Fl.* vol. iv. p. 135.

11. ERIOCAULON.

Flowers arranged in a compact scaly head.

Barren Flower in the middle. Calyx none. Corolla of one petal, with a cylindrical tube, the limb divided into four or six segments, in a double row. Filaments four or six, thread-shaped, erect. Anthers roundish, two-celled.

Fertile Flowers in the circumference. Calyx none. Corolla of four or six petals, in a double row. Germen superior, two- or three-lobed. Style one, very short. Stigmas two or three, awl-shaped. Capsule two- or three-lobed, with as many cells and valves. Seeds solitary, globular.

E. septangulâre. Jointed Pipewort. Stem seven-cornered, much longer than the compressed, cellular, taper-pointed leaves; outer scales without flowers, smooth, the inner scales and corolla fringed at the extremity.——Roots of numerous, long, white, jointed fibres: leaves forming a tuft, two or three inches long: stalk slender, from six to ten inches long, with a solitary, globular, white head. Perennial: flowers in September: grows in several lakes in the islands of Skye and Coll. *Engl. Bot.* vol. xi. pl. 733. *Engl. Fl.* vol. iv. p. 140.

PENTANDRIA.

12 XA'NTHIUM.

Barren Flower compound. Common calyx of many imbricated, equal scales. Compound corolla hemispherical, uniform: florets of one petal, funnel-shaped, with five equal, marginal segments. Filaments five in each floret, parallel, forming a cylinder. Anthers erect, parallel, not united. Common receptacle scarcely any, the florets being separated by scales.

Fertile Flowers beneath the others. Common calyx two-flowered, formed of two opposite, acutely three-lobed leaves, covered with hooked prickles, and united to the germen. Corolla none. Germen oval. Styles two pairs, hair-like. Stigmas simple. Drupe formed of the permanent prickly calyx. Nut two-celled. Seeds solitary.

X. strumârium. Broad-leaved Bur-weed. Prickles none; leaves heart-shaped, three-ribbed at the base.——Stem two feet high, erect, branched, furrowed, leafy: leaves stalked, lobed, and doubly serrate. Annual: flowers in August and September: grows in dunghills, and in rich ground, in the south of England; rare. *Engl. Bot.* vol. xxxvi. pl. 2544. *Engl. Fl.* vol. iv. p. 136.

13. AMARA'NTHUS.

Barren Flowers. Calyx of three or five erect, lance-shaped, coloured leaves. Corolla none. Filaments three or five, hair-like, erect, as long as the calyx. Anthers oblong, two-lobed.

Fertile Flowers in the same cluster. Calyx of three or five erect, lance-shaped, coloured leaves. Corolla none. Germen superior, egg-

shaped. Styles three, sometimes two. Stigma acute, downy on the upper side. Capsule egg-shaped, one-celled. Seed solitary, globular, filling the capsule.

A. Blítum. Wild Amaranth. Flowers three-cleft, with three stamens; leaves egg-shaped; stem spreading.——Stems branched, round, furrowed, leafy: leaves roughish on the edges: flowers green, in small axillar, leafy clusters. Annual: flowers in August: grows on dunghills and in rich ground, in the south of England; rare. *Engl. Bot.* vol. xxxi. pl. 2212. *Engl. Fl.* vol. iv. p. 137.

14. BRYO'NIA.

Barren Flowers. Calyx of one leaf, bell-shaped, with five acute teeth. Corolla bell-shaped, with five egg-shaped, spreading segments. Filaments three, short. Anthers five; two together on two of the filaments.

Fertile Flowers. Calyx and corolla as in the barren flower. Germen inferior. Style three-cleft, shorter than the corolla. Stigmas cleft, spreading. Berry roundish, smooth, with two or more cells. Seeds in pairs, roundish.

B. dióica. Red-berried Bryony. Leaves palmate, rough on both sides; barren flowers and fertile flowers on separate plants.——Stems several feet long, climbing by their tendrils: leaves large, five-lobed: flowers white, veined with green, in axillar panicles: berries scarlet. The root is acrid and purgative. Perennial: flowers from May to September: grows in hedges and thickets. *Engl. Bot.* vol. vii. pl. 439. *Engl. Fl.* vol. iv. p. 138.

POLYANDRIA.

15. CERATOPH'YLLUM.

Barren Flowers. Calyx deeply divided into many oblong, equal, erect, permanent segments. Corolla none. Filaments twice as many as the segments of the calyx, from sixteen to twenty, very short. Anthers oblong, erect, longer than the calyx.

Fertile Flowers. Calyx and corolla as in the barren flowers. Germen superior, egg-shaped, compressed. Style none. Stigma oblong. Drupe egg-shaped, compressed, crowned with the permanent stigma. Nut large, of the shape of the drupe.

C. demérsum. Common Hornwort. Fruit armed with three thorns; segments of the calyx notched at the end.——Two or three feet long, dark green, with numerous whorled leaves, repeatedly divided into linear segments. Perennial: flowers in August and September: grows under water in ditches, lakes, and slow rivers. *Engl. Bot.* vol. xiv. pl. 947. *Engl. Fl.* vol. iv. p. 141.

C. submérsum. Unarmed Hornwort. Fruit thornless; segments of the calyx acute, entire.——Resembles the former. Perennial: flowers in September: grows in ditches between Yarmouth and Gorlestone; rare. *Engl. Bot.* vol. x. pl. 679. *Engl. Fl.* vol. iv. p. 142.

16. MYRIOPHY'LLUM.

Barren Flowers. Calyx of four oblong, erect leaves, the outer largest. Petals four, inversely egg-shaped. Filaments eight, hair-like, longer than the calyx. Anthers oblong.

Fertile Flowers beneath the others. Calyx and corolla the same. Germens four, inferior, oblong. Styles none. Stigmas downy. Drupes four, oblong. Nuts solitary, with a hard shell, containing a single kernel.

M. spicâtum. Spiked Water-milfôil. Flowers in whorled, interrupted, leafless spikes.——Stem slender, branched, round, several feet long, with finely pinnatifid, spreading leaves, four together in a whorl; petals reddish. Perennial: flowers in July and August: grows under water, in ditches, pools, lakes, and rivers. *Engl. Bot.* vol. ii. pl. 83. *Engl. Fl.* vol. iv. p. 143.

M. verticillâtum. Whorled Water-milfoil. Flowers axillar.——Stems several feet high, the flowering part of the stem or branches rising above the water: petals small white. Perennial: flowers in July: grows in ditches and ponds. *Engl. Bot.* vol. iv. pl. 218. *Engl. Fl.* vol. iv. p. 143.

17. SAGITTA'RIA.

Barren Flowers numerous. Calyx of three egg-shaped, permanent leaves. Corolla of three roundish, spreading, deciduous petals, thrice the size of the calyx. Filaments numerous, about twenty-four, awl-shaped, collected into a round head. Anthers heart-shaped, much shorter than the petals.

Fertile Flowers fewer, below the others. Calyx and Corolla as above. Germens numerous, collected into a head, compressed, bulging externally, tapering into very short styles. Stigmas acute, permanent, Seeds numerous, inversely egg-shaped, compressed, margined.

S. sagittifôlia. Common Arrow-head. Leaves arrow-shaped, acute. ——Leaves all from the root, on long cellular stalks: flowers white, three in a whorl. Perennial: flowers in July: grows in ditches and at the edges of pools and rivers. *Engl. Bot.* vol. ii. pl. 84. *Engl. Fl.* vol. iv. p. 144.

18. A'RUM.

Common calyx of one erect, sheathing, oblong leaf, convolute at the base, converging at the top, compressed in the middle, coloured within, containing the flowers arranged upon a common stalk, the latter terminating in a coloured, naked appendage. Corolla none.

Barren Flowers. Filaments numerous, very short, arranged in several close rows round the stalk, within the convoluted part of the calyx, surmounted at a little distance above by a ring of pointed, antherless filaments. Anthers two-lobed.

Fertile flowers. Germens sessile, inversely egg-shaped, in a dense ring round the lower part of the stalk, at a small distance below the

barren flowers. Styles none. Stigma downy. Berry globular, juicy, one-celled. Seeds several, roundish.

A. maculátum. Cuckow-pint. Wake Robin. Stem none; leaves halberd-shaped, entire; common-stalk of the flowers club-shaped, obtuse.——Root tuberous: leaves stalked, spotted with black: berries scarlet. The root, when dried, affords a nutritious flour, fit for making bread. Perennial: flowers in May: grows in bushy places, hedges, and the borders of fields. *Engl. Bot.* vol. xix. pl. 1298. *Engl. Fl.* vol. iv, p. 146.

19. POTE'RIUM.

Barren Flowers. Calyx of three egg-shaped, spreading, coloured, deciduous leaves. Corolla of one petal, tubular, deeply divided into four egg-shaped, spreading, permanent segments. Filaments numerous, from thirty to fifty, hair-like, much longer than the corolla. Anthers roundish, two-lobed.

Fertile Flowers above the others. Calyx as above. Corolla of one petal, wheel-shaped; tube short, closed at the mouth; limb with four deep, egg-shaped, reflected, permanent segments. Germens one or two, oblong, two-celled, crowned with a hair-like, coloured style, much longer than the corolla. Stigma rayed, coloured. Nut invested by the dry tube of the corolla, one or two-celled. Kernels oval, solitary.

P. Sanguisórba. Salad-Burnet. Thornless; stem somewhat angular. ——Stems from one to two feet high, smooth branched: leaves pinnate with an odd leaflet: heads of purple flowers globular. Perennial: flowers in July: grows in dry pastures. *Engl. Bot.* vol. xii. pl. 860. *Engl. Fl.* vol. iv. p. 147.

20. QUE'RCUS.

Barren Flowers in a loose catkin, deciduous. Calyx a scale of one leaf, deeply divided into several segments. Corolla none. Filaments eight or more, awl-shaped, short. Anthers roundish, two-lobed.

Fertile Flowers in separate catkins. Calyx double; the outer inferior, hemispherical, leathery, one-flowered, entire, becoming enlarged and externally scaly or tuberculated; the inner superior, of one leaf, with six minute, downy segments, closely surrounding the base of the style. Corolla none. Germen one, below the inner calyx, globular, three-celled, with rudiments of six seeds. Nut solitary, oval, leathery, one-celled. Kernel solitary, rarely two.

Q. Róbur. Common Oak. Leaves deciduous, oblong, dilated towards the end, sinuated and lobed, the sinuses rather acute, the lobes obtuse; fruit-stalks elongated.——A large tree, with round spreading branches: in the Highlands of Scotland, where it is abundant in an indigenous state, it seldom attains a large size: the uses of the wood and bark are well known. Flowers in April: grows in natural woods, in the uncultivated parts of the country. *Engl. Bot.* vol. xix. pl. 1342. *Engl. Fl.* vol. iv. p. 273.

Q. sessiliflóra. Sessile-fruited Oak. Leaves deciduous, oblong; on elongated stalks, with opposite acute sinuses; fruit sessile.——This species is distinguished from the former, by its more regularly sinuated leaves, and sessile fruit: the wood is said to be much inferior. Flowers in April: grows in woods. *Engl. Bot.* vol. xxvi. pl. 1845. *Engl. Fl.* vol. iv. p. 150.

21. FA'GUS.

Barren Flowers in a roundish or cylindrical catkin. Calyx of one leaf, divided into five or six segments. Corolla none. Filaments from five to twenty, hair-like, longer than the calyx. Anthers roundish or oblong, two-lobed.

Fertile Flowers stalked. Calyx double; the outer inferior, leathery, externally prickly, with four, five, or six deep segments, containing two or three flowers; the inner superior, of one leaf, with five or six deep segments, internally woolly. Corolla none. Germens two or three, below the inner calyx, egg-shaped, compressed or angular, three or six-celled, with rudiments of two seeds in each cell. Styles three or six, short. Stigmas oblong, undivided, permanent. Nuts two or three, egg-shaped, more or less angular, leathery, one-celled, attached to the base of the outer calyx, and crowned by the upper. Kernels one, two, or three.

F. Castánea. Chesnut Tree. Leaves lance-shaped, acutely serrate, smooth beneath; prickles of the calyx compound and entangled; stigmas six.——A large tree with widely spreading branches. The wood is used for the same purpose as oak. The kernels are wholesome and agreeable. Flowers in May: grows in woods in the south of England. *Engl. Bot.* vol. xiii. pl. 886. *Engl. Fl.* vol. iv. p. 151.

F. sylvática. Common Beech. Leaves egg-shaped, indistinctly serrate, smooth; prickles of the outer calyx simple; stigmas three.——A large tree with smooth bark and spreading branches. The nuts fatten hogs, and are eaten by squirrels and other wild animals. Flowers in April and May: grows in woods. *Engl. Bot.* vol. xxvi. pl. 1846.

22. BETULA.

Barren Flowers. Catkin cylindrical, loose, imbricated all round, with ternate, concave scales, the middle one largest, egg-shaped. Corolla none. Filaments from ten to twelve, shorter than the scale. Anthers roundish, two-lobed.

Fertile Flowers. Catkin cylindrical, dense; scales peltate, dilated, outwards, three-lobed, three-flowered. Corolla none. Germen compressed, bordered, two-celled. Styles two, awl-shaped, downy. Stigmas simple. Nut oblong, deciduous, winged, one-celled. Kernel solitary.

B. álba. Common Birch. Leaves egg-shaped, acute, unequally serrate, nearly smooth.——A rather tall tree, with a white cuticle, peeling transversely, the twigs very slender and more or less drooping. The wood is hard and white. Flowers in April and May: grows abundantly in extensive natural woods in the Highlands of Scotland,

as well as in other parts of the country. *Engl. Bot.* vol. xxxi. pl. 2198. *Engl. Fl.* vol. iv. p. 153.

B. nána. Dwarf Birch. Leaves round, crenate, reticulated with veins beneath.——A shrub three or four feet high. Grows on the sides of some of the higher Scottish mountains, as Ben Lawers and the Braemar mountains. *Engl. Bot.* vol. xxxiii. pl. 2326. *Engl. Fl.* vol. iv. p. 154.

23. CARPI'NUS.

Barren Flowers. Catkin cylindrical, loose, imbricated all round, with egg-shaped, acute, fringed, single-flowered scales, accompanied by three smaller inner ones. Corolla none. Filaments ten or more, hair-like, much shorter than the scale. Anthers roundish, two-lobed.

Fertile Flowers in a bracteated cluster. Calyx double; the outer inferior, of several oblong, unequal, erect, deciduous, two- or three-flowered scales: the inner superior, deeply divided into three erect, acute, permanent segments. Corolla none. Germen egg-shaped, crowned by the inner calyx. Styles very short, permanent. Stigmas two, awl-shaped, erect, deciduous. Nut egg-shaped, angular, leathery, one-celled, crowned by the inner calyx and the base of the style. Kernel one.

C. Bétulus. Common Hornbeam. Bracteas of the fruit flat, oblong, serrated, with two lateral lobes.——A small tree with smooth light grey bark: leaves heart-shaped, doubly serrate, smooth. The wood is white and tough. Flowers in May: grows in woods and hedges. *Engl. Bot.* vol. xxix. pl. 2032. *Engl. Fl.* vol. iv. p. 156.

24. CO'RYLUS.

Barren Flowers. Catkin cylindrical, imbricated all round with scales, each enclosing a single flower, narrower at the base, broader at the end, with three deep egg-shaped segments, the middle one largest and lying over the others. Corolla none. Filaments eight, very short, hanging from the inner side of the scale. Anthers oblong, two-celled, pendulous, shorter than the scale.

Fertile Flowers at a distance from the others, from scaly buds. Calyx double: the outer inferior, of one leaf, deeply divided, many-flowered, finally enlarged, permanent; inner superior, minute, deciduous. Corolla none. Germen very small, egg-shaped, with rudiments of two seeds. Styles two, very short. Stigmas prominent, awl-shaped, downy, deciduous. Nut egg-shaped, hard, compressed, downy at the top, one-celled, invested with the greatly-enlarged outer calyx. Kernel solitary, egg-shaped.

C. Avellána. Common Hasel. Stipules egg-shaped, obtuse; leaves roundish, heart-shaped, pointed; calyx shorter than the nut.——A small bushy tree, with numerous branches, which are hairy when young: leaves deeply serrate, light green, downy. The wood makes excellent charcoal for drawing, and is used for numerous economical

purposes. The nuts are used as food, and are also eaten by squirrels, hogs, and other animals. Flowers in March and April: grows in woods and copses. *Engl. Bot.* vol. xi. pl. 723. *Engl. Fl.* vol. iv. p. 157.

MONADELPHIA.

25. PI'NUS.

Barren Flowers. Catkin deciduous, of numerous, naked, spreading stamens, connected by a common stalk. Calyx none. Corolla none. Filaments very short. Anthers erect, wedge-shaped, two-celled, crowned with a jagged membranous crest.

Fertile flowers. Catkin egg-shaped, or roundish, of numerous, imbricated, close, stiff, permanent, two-flowered scales. Corolla none. Germens two. Style one to each germen. Stigmas simple. Cone egg-shaped, hard, of numerous, woody, permanent scales. Seeds two to each scale, oval, each crowned with a membranous wing.

P. sylvéstris. Scotch Fir. Leaves in pairs, stiff; cones egg-shaped, acute, as long as the leaves.——A tall straight tree, with scaly reddish-brown bark. The wood is of great value for numerous purposes. Resin and tar are obtained from it. The roots are used in many parts of Scotland for candles. Flowers in May: grows in the Highlands of Scotland in extensive forests. *Engl. Bot.* vol. xxxv. pl. 2460. *Engl. Fl.* vol. iv. p. 275.

Class XXII. DIŒCIA.

Plants having Flowers furnished with Stamens only on one individual, and Flowers furnished with Pistils only on another individual of the same species.

Order I. MONANDRIA. *One Stamen.*

(Several species of Salix.)

Order II. DIANDRIA. *Two Stamens.*

1. **SA'LIX.** *Flowers* in imbricated *catkins.*
   Barren flowers. Calyx a scale. *Petals* none. *Nectary* a gland at the base of the scale. *Stamens* from one to five.
   Fertile flowers. Calyx a scale. *Petals* none. *Nectary* a gland. *Stigmas* two. *Capsule* one-celled, two-valved, many-seeded. *Seeds* with a tuft of hairs.

Order III. TRIANDRIA. *Three Stamens.*

2. **EMPE'TRUM.** *Barren flowers. Calyx* deeply divided into three segments. *Corolla* of three petals. *Stamens* hair-like, from three to nine.

Fertile Flowers. *Calyx* deeply divided into three segments. *Corolla* of three petals. *Stigmas* nine. *Berry* superior, two-seeded.

3. RU'SCUS. *Barren flowers.* *Calyx* of six leaves. Corolla none. *Nectary* egg-shaped, tubular, bearing the stamens.
Fertile flowers. *Calyx* of six leaves. *Corolla* none. *Style* one. *Berry* superior, three-celled. *Seeds* in pairs.

(*Valeriana dioica* and *some species of Salix.*)

Order IV. TETRANDRIA. *Four Stamens.*

5. HIPPO'PHA-E. *Barren flowers.* *Calyx* deeply cleft. *Corolla* none.
Fertile flowers. *Calyx* tubular, cleft. *Style* one. *Berry* superior. *Seed* solitary, oblong.

6. MYRI'CA. *Barren flowers* in a catkin. *Calyx* a concave scale. *Corolla* none.
Fertile flowers in a catkin. *Calyx* a concave scale. *Corolla* none. *Styles* two. *Berry* superior. *Seed* solitary, globular.

4. VI'SCUM. *Barren flowers.* *Calyx* none. *Corolla* of one petal, deeply divided into four segments. *Anthers* sessile on the segments of the corolla.
Fertile flowers. *Calyx* a slight border. *Corolla* with four segments. *Style* none. *Berry* inferior. *Seed* solitary compressed.

(*Rhamnus catharticus.* *Euónymus europæus.* *Urtica dioica.*)

Order V. PENTANDRIA. *Five Stamens.*

7. HU'MULUS. *Barren flowers.* *Calyx* five-leaved. *Corolla* none. *Anthers* with two terminal pores.
Fertile flowers in a catkin. *Calyx* an oblique undivided scale. *Corolla* none. *Styles* two. *Seed* one.

(*Ribes alpina.* *Bryonia dioica.* *Salix pentandra.*)

Order VI. HEXANDRIA. *Six Stamens.*

8. TA'MUS. *Barren flowers.* *Calyx* none. *Corolla* with six deep segments.
Fertile flowers. *Calyx* none. *Corolla* with six deep segments. *Style* three-cleft. *Berry* inferior, three-celled. *Seeds* in pairs.

(*Rumex Acetosa* and *Acetosella.*)

Order VII. OCTANDRIA. *Eight Stamens.*

10. RHODI'OLA. *Barren flowers.* *Calyx* with four deep segments. *Petals* four. *Nectaries* four-notched.
Fertile flowers. *Calyx, petals,* and *nectaries* the same. *Pistils* four. *Capsules* four. *Seeds* numerous.

9. PO'PULUS. *Barren flowers.* *Catkin* imbricated. *Calyx* a jagged scale. *Corolla* turbinate, oblique, undivided.
Fertile flowers. *Catkin, calyx,* and *corolla* the same. *Stigmas* four or eight. *Capsule* superior, one-celled, two-valved. *Seeds* with a tuft of hairs.

Order VIII. ENNEANDRIA. *Nine Stamens.*

11. MÈRCURIA'LIS. *Barren flowers. Calyx* with three deep segments. *Corolla* none. *Stamens* from nine to twelve. *Anthers* of two globular lobes.
Fertile flowers. Calyx and *corolla* the same. *Styles* two. *Capsule* two-lobed, two-celled. *Seeds* solitary.
12. HYDRO'CHARIS. *Barren flowers. Calyx* with three deep segments. *Petals* three. *Inner filaments* with a beak.
Fertile flowers. Calyx and *corolla* the same. *Styles* six. *Capsule* inferior, six-celled. *Seeds* numerous.
(Empetrum nigrum.)

Order IX. DECANDRIA. *Ten Stamens.*

(Silene otites. Lychnis sylvestris and vespertina.)

Order X. ICOSANDRIA. *Numerous Stamens, arising from the Calyx.*

(Rubus Chamæmorus.)

Order XI. POLYANDRIA. *Numerous Stamens, arising from the Receptacle.*

(Stratiotes aloides. Populus alba, tremula and nigra.

Order XII. MONADELPHIA. *Filaments united into one set.*

13. JUNI'PERUS. *Barren flowers. Calyx* the scale of a *catkin. Corolla* none. *Stamens* three.
Fertile flowers. Calyx the scales of a *catkin*, few, finally pulpy and united into a *berry* with three seeds.
14. TA'XUS. *Barren flowers. Calyx* none. *Corolla* none. *Styles* one. *Anthers* peltate, with several lobes.
Fertile flowers. Calyx cup-shaped, entire. *Corolla* none. *Style* one. *Seeds* one, enclosed in the enlarged, pulpy calyx.
(Salix rubra and *Croweana.)*

DIŒCIA.—DIANDRIA.

1. SA'LIX.*

Barren Flowers. Catkin oblong, imbricated all round. Calyx an oblong, spreading, one-flowered scale. Corolla none. Nectary a small oblong, compressed gland, at the base of the scale; sometimes double. Filaments generally two, but varying from one to five or more, thread-shaped, longer than the calyx. Anthers two-lobed, two- or four-celled.

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* In this very difficult and extensive genus, the arrangement and characters of Smith have been exclusively adopted, as the comparison of descriptions, with the aid of a few dried twigs, has been judged insufficient for correct discrimination.

Fertile Flowers. Catkin oblong, imbricated all round. Calyx an oblong scale. Corolla none. Germen superior, egg-shaped. Style terminal, permanent. Stigmas two, notched or cleft, spreading. Capsule egg-shaped, obtuse, or tapering, one-celled, two-valved. Seeds numerous, minute, oval, tufted with soft erect hairs.

* *Adult leaves serrate, smooth, or nearly so.*

S. triándra. Long-leaved Triandrous Willow. Leaves oblong, inclining to linear, serrate, smooth, rather unequally sloping at the base; stamens three; germen stalked, egg-shaped, smooth; stigmas nearly sessile. ——An erect tree, rising to the height of thirty feet. It is cultivated as an osier, for white basket-work, for which purpose it is one of the most valuable. Flowers in May and August: grows in wet woods and hedges; common. *Engl. Bot.* vol. xx. pl. 1435. *Engl. Fl.* vol. iv. p. 166.

S. Hoffmanniána. Short-leaved Triandrous Willow. Leaves oblong, inclining to egg-shaped, serrate, smooth, slightly rounded at the base; stamens three; germen stalked, egg-shaped, compressed, smooth; stigmas nearly sessile.——From twelve to fifteen feet high. Flowers in May: grows on the banks of rivulets in Sussex and near Cambridge. *Engl. Fl.* vol. iv. p. 168.

S. lanceolàta. Sharp-leaved Triandrous Willow. Leaves lance-shaped, serrate, smooth, tapering towards each end; leaf-stalks decurrent; germen stalked, egg-shaped, smooth; style as long as the stigmas.—— Cultivated for the coarser kinds of basket-work. Flowers in April and May: grows in low meadows and woods. *Engl. Bot.* vol. xx. pl. 1456. *Engl. Fl.* vol. iv. p. 168.

S. amygdalína. Almond-leaved Willow. Leaves egg-shaped, serrate, smooth, rounded and unequal at the base; stamens three; germen egg-shaped, compressed, smooth; its stalk almost as long as the scale; stigmas nearly sessile; young branches furrowed.——A large bushy shrub or small tree; cultivated for coarse basket-work. Flowers in April and May, and in August: grows on the banks of rivers and ditches. *Engl. Bot.* vol. xxvii. pl. 1936. *Engl. Fl.* vol. iv. p. 169.

S. pentándra. Sweet Bay-leaved Willow. Leaves egg-shaped, pointed, crenate, glandular, smooth; leaf-stalks glandular at the top; stamens five or more, hairy at the base; germen egg-shaped, tapering, smooth, nearly sessile.——An erect tree, fifteen or twenty feet high: leaves smooth on both sides, their edges discharging a yellow resin, from which emanates the fragrant bay-like scent, for which the plant is noted. Flowers in June and July: grows about rivers. *Engl. Bot.* vol. xxvi. pl. 1805. *Engl. Fl.* vol. iv. p. 171.

S. nígricans. Dark-broad-leaved Willow. Leaves between lance-shaped and elliptical, acute, crenate, smooth, with a downy rib above, glaucous beneath; stamens two, thrice the length of the hairy scales; germen lance-shaped, downy, on a short downy stalk.——A large bushy shrub. Flowers in April: grows in marshes, woods, and thickets. *Engl. Bot.* vol. xvii. pl. 1213. *Engl. Fl.* vol. iv. p. 172.

S. phylicifólia. Tea-leaved Willow. Leaves between lance-shaped and elliptical, with waved serratures, smooth, glaucous beneath; stipules glandular on the inside; germen lance-shaped, stalked, silky:

style twice as long as the stigmas; branches recumbent, rooting.——A low spreading bush. Flowers in May: grows at Finlarig in Breadalbane. *Engl. Bot.* vol. xxviii. pl. 1958. *Engl. Fl.* vol. iv. p. 173.

S. Borreriána. Dark Upright Willow. Leaves lance-shaped, with shallow, even serratures, very smooth, glaucous beneath; stipules obsolete; branches erect; scales of the catkins acute, shaggy.——A bushy shrub, eight or ten feet high, with dark brown branches. Flowers in May: found by Mr. W. Borrer in Breadalbane and Glen Nevis. *Engl. Fl.* vol. iv. p. 174.

S. nítens. Shining-leaved Willow. Leaves elliptical, acute, unequally serrate, very smooth and glaucous beneath, minutely downy with a downy central rib above; stipules obsolete; branches spreading; catkins nearly sessile, with acute, shaggy scales.——A bushy shrub, ten or twelve feet high: leaves an inch and a half long, deep shining green. Flowers in April: grows in the mountainous parts of Scotland. *Engl. Fl.* vol. iv. p. 175.

S. Davalliána. Davallian Willow. Leaves lance-shaped, inclining to inversely egg-shaped, finely serrate, or minutely toothed, tapering at both ends, smooth; rather glaucous beneath; flower-stalks, central rib, and young branches, somewhat downy; catkins with small rounded scales: capsules lance-shaped, smooth.——A bushy shrub, about six feet high, with smooth, brown branches: leaves about an inch and a half long. Flowers in May: grows in the Highlands of Scotland. *Engl. Fl.* vol. iv. p. 175.

S. Wulfeniána. Wulfenian Willow. Leaves inversely egg-shaped or elliptical, somewhat pointed, finely serrate, smooth, glaucous beneath; catkin dense, with hairy scales, longer than the stalks of the awl-shaped hairy germens; style longer than the stigmas.——A shrub about six feet high: leaves an inch and a half long, with reticulated veins. Flowers in April and May: found by Mr. W. Borrer in Breadalbane and at Kirby Lonsdale. *Engl. Fl.* vol. iv. p. 177.

S. tétrapla. Four-ranked Willow. Leaves between elliptical and oblong, pointed, unequally serrated, nearly smooth, glaucous with prominent veins beneath; stipules half heart-shaped; scales commonly shorter than the hairy stalks of the oblong smooth germens; style as long as the stigmas.——A small shrub, nearly allied to the last, of which Dr. Walker says, "four leaves compleat the spiral upon the branch, and on account of this singularity, it has been called S. tetrapla." *Essays*, p. 408. Flowers in May: found in Breadalbane by Mr. W. Borrer. *Engl. Fl.* vol. iv. p. 177.

S. bícolor. Shining dark-green Willow. Leaves between elliptical and oblong, acute, waved, and slightly serrate, nearly smooth, glaucous beneath; leaf-stalks dilated at the base; stipules pointed, serrate; scales obtuse, hairy, half as long as the densely downy, egg-shaped, long-stalked germen.——A small tree, six feet high or more, with erect reddish-brown branches. Flowers in April and May: grows in woods and thickets. *Engl. Bot.* vol. xxvi. pl. 1806. *Engl. Fl.* vol. iii. p. 178.

S. tenuifólia. Thin-leaved Willow. Leaves elliptical, acute, serrate, smoothish, glaucous beneath; stipules small or none; scales hairy; capsule egg-shaped, smooth, on a short smooth stalk.——A

small spreading shrub: the young branches downy. Flowers in May and June: grows about the rocky banks of rivers. *Engl. Bot.* vol. xxxi. pl. 2186. *Engl. Fl.* vol. iv. p. 179.

S. malifólia. Apple-leaved Willow. Leaves between elliptical and oblong, toothed, waved, thin and crackling, very smooth; stipules heart-shaped, about the length of the flower-stalks; scales inversely egg-shaped, bearded; germen lance-shaped, smooth, on a short smooth stalk.——A shrub with leaves resembling those of an apple-tree. Flowers in April. Found in Scotland by Mr. Dickson. *Engl. Bot.* vol. xxiii. pl. 1617. *Engl. Fl.* vol. iv. p. 180.

S. petioláris. Dark-long-leaved Willow. Leaves lance-shaped, serrate, smooth, glaucous beneath, somewhat unequal at the base; stipules lance-shaped, somewhat curved, toothed; catkins loose; scales hairy, shorter than the stalks of the egg-shaped, silky germens, stigmas divided, sessile.——A bushy tree with slender purplish branches: leaves four inches long, bright green above. Flowers in April. Found by Mr. G. Don, in marshes in Angus-shire. *Engl. Bot.* vol. xvi. pl. 1147. *Engl. Fl.* vol. iv. p. 181.

S. vitellína. Yellow Willow, or *Golden Osier.* Leaves lance-shaped, acute, with cartilaginous serratures, smooth above, glaucous and somewhat silky beneath; stipules minute, lance-shaped, deciduous, smooth; germen sessile, broadly lance-shaped, smooth; scales between lance-shaped and linear, acute, fringed at the base, longer than the pistil. ——A tree of moderate height, with smooth, shining, yellow branches. Flowers in May: grows on the banks of rivers. *Engl. Bot.* vol. xx. pl. 1389. *Engl. Fl.* vol. iv. p. 182.

S. decípiens. White Welsh, or *Varnished Willow.* Leaves lance-shaped, pointed, serrate, very smooth; flower-stalks somewhat glandular; germen tapering, stalked, smooth; style longer than the cleft stigmas; branches highly polished.——A small tree distinguished by its shining clay-coloured branches. When cultivated, affords good rods for basket-work. Flowers in May: grows in low meadows and moist hedges. *Engl. Bot.* vol. xxvii. pl. 1937. *Engl. Fl.* vol. iv. p. 184.

S. frágilis. Crack Willow. Leaves between lance-shaped and egg-shaped, pointed, serrate, very smooth, leaf-stalks glandular; germen egg-shaped, abrupt, nearly sessile, smooth; scales oblong, about the length of the stamens; stigmas cleft, longer than the style.——A tall tree, with very brittle, smooth, brown branches: leaves four or five inches long, dark green above. Flowers in April and May: grows on the banks of rivers. *Engl. Bot.* vol. xxvi. pl. 1807. *Engl. Fl.* vol. iv. p. 185.

S. Russelliána. Bedford Willow. Leaves lance-shaped, tapering at both ends, serrate, very smooth; leaf-stalks glandular, sometimes bearing leaflets; germen tapering, stalked, longer than the scales; style as long as the stigmas.——A tall and handsome tree, with long light green leaves. Flowers in April and May: grows by rivers and in marshy woods and meadows. *Engl. Bot.* vol. xxvi. pl. 1808. *Engl. Fl.* vol. iv. p. 186.

S. purpúrea. Bitter purple Willow. Branches decumbent; leaves lance-shaped, broadest towards the end, serrate, very smooth, narrow

at the base; stamen one; stigmas very short, egg-shaped, nearly sessile.——A shrub with spreading branches of a shining deep purple colour. Flowers in March: grows in low meadows, about the banks of rivers and ditches. *Engl. Bot.* vol. xx. pl. 1388. *Engl. Fl.* vol. iv. p. 187.

S. Hélix. Rose Willow. Branches erect, leaves between oblong and lance-shaped, pointed, slightly serrate, very smooth, linear towards the base; stamen one; style nearly as long as the linear divided stigmas.——A tree about ten feet high, with erect, pale yellowish or purplish, polished branches. Flowers in March and April: grows on the banks of rivers. *Engl. Bot.* vol. xix. pl. 1343. *Engl. Fl.* vol. iv. p. 188.

S. Lambertiána. Boyton Willow. Branches erect; leaves lance-shaped, broadest towards the end, pointed, serrate, smooth, rounded at the base; stipules none; stamen one; stigmas egg-shaped, obtuse, notched, very short, nearly sessile.——A small tree with erect purplish branches. Flowers in March and April: grows on the banks of rivers. *Engl. Bot.* vol. xix. pl. 1359. *Engl. Fl.* vol. iv. p. 190.

S. Forbiána. Fine Basket Osier. Branches erect; leaves between lance-shaped and oblong, with shallow serratures, smooth, rounded at the base, glaucous beneath; stamen one; style nearly as long as the linear, divided stigma.——A shrub with erect slender greyish-yellow twigs, highly esteemed for the finer kinds of basket-work. Flowers in April: grows in meadows and marshy places in Norfolk and Cambridgeshire. *Engl. Bot.* vol. xix. pl. 1344. *Engl. Fl.* vol. iv. p. 191.

S. rúbra. Green-leaved Osier. Stamens united for half their length; leaves lance-shaped, inclining to linear, elongated, acute, smooth, with shallow serratures, green on both sides; stigma egg-shaped, undivided.——A small tree, with long, smooth, purplish branches. One of the most valuable for basket-work. Flowers in April and May: grows in low meadows and marshy places. *Engl. Bot.* vol. xvi. pl. 1145. *Engl. Fl.* vol. iv. p. 191.

S. Crowedna. Broad-leaved Monadelphous Willow. Stamens united at the base; leaves elliptical, slightly serrate, smooth, glaucous beneath.——A bushy shrub, four or five feet high, with stout brittle brownish-yellow branches: flowers in April and May: grows in marshy meadows and thickets. *Engl. Bot.* vol. xvi. pl. 1146. *Engl. Fl.* vol. iv. p. 192.

S. prunifólia. Plum-leaved Willow. Leaves broadly egg-shaped, serrate, smooth on both sides, even above, glaucous beneath; stem erect, much branched; capsules egg-shaped, covered, like the scales, with long silky hairs.——A bushy shrub, often three feet high, with spreading branches: flowers in April and May: grows on the Highland mountains. *Engl. Bot.* vol. xix. pl. 1361. *Engl. Fl.* vol. iv. p. 193.

S. vaccíniifólia. Bilberry-leaved Willow. Leaves between egg-shaped and lance-shaped, smooth and even above, glaucous and silky beneath; capsules egg-shaped, silky; stems decumbent.——A small shrub with long, slender branches, silky when young: flowers in April: grows on the higher mountains of Scotland. *Engl. Bot.* vol. xxiii. pl. 2341. *Engl. Fl.* vol. iv. p. 194.

S. venulósa. Veiny-leaved Willow. Leaves egg-shaped, serrate, naked, reticulated with prominent veins above, rather glaucous beneath; capsules egg-shaped, silky; stem erect, much branched.——A small bushy shrub, allied to *S. prunifolia:* flowers in April and May: grows in the Highlands of Scotland. *Engl. Bot.* vol. xix. pl. 1362. *Engl. Fl.* vol. iv. p. 195.

S. myrsinites. Green Whortle-leaved Willow. Leaves elliptical, serrate, smooth, veiny, polished on both sides; young branches hairy; germens stalked, downy; capsules awl-shaped.——A small bushy shrub, with dark brown branches: flowers in May and June: grows in the Highlands of Scotland. *Engl. Bot.* vol. xix. pl. 1360. *Engl. Fl.* vol. iv. p. 195.

S. Dicksoniána. Broad-leaved Mountain Willow. Leaves elliptical, acute, slightly toothed, smooth, glaucous beneath; young branches very smooth; catkins egg-shaped, short, erect; germen stalked, egg-shaped, silky; stigmas nearly sessile.——A small smooth shrub, with brownish branches: flowers in April: grows in the Highlands of Scotland. *Engl. Bot.* vol. xx. pl. 1390. *Engl. Fl.* vol. iv. p. 196.

S. carináta. Folded-leaved Willow. Leaves egg-shaped, finely toothed, smooth, minutely veined, folded so as to form a keel; catkins cylindrical, with rounded, hairy scales; germen sessile, egg-shaped, silky.——A bushy shrub, with brown branches, hairy when young: flowers in April: grows in the Highlands of Scotland. *Eng. Bot.* vol. xix. pl. 1363. *Engl. Fl.* vol. iv. p. 197.

S. arbúscula. Little Tree Willow. Leaves lance-shaped, acute, obscurely toothed, smoothish, glaucous beneath, silky when young; branches downy; catkin egg-shaped, erect; germen stalked, between egg-shaped and lance-shaped, silky.——Stem erect, slender, about a foot high, branchless below, like a small tree, with light brown branches: flowers in April: grows in the Highlands of Scotland. *Engl. Bot.* vol. xix. pl. 1366. *Engl. Fl.* vol. iv. p. 198.

S. livida. Livid Dwarf Willow. Leaves between elliptical and oblong, obscurely toothed, smooth, livid beneath; stipules none; germen nearly cylindrical, downy, its stalk twice as long as the scale; stigmas nearly sessile.——A small shrub, about a foot high, with shining divergent branches. Found by Mr. Maughan, at the foot of Hertfell, near Moffat. *Engl. Fl.* vol. iv. p. 199.

S. herbácea. Least Willow. Leaves round, serrate, reticulated with veins, smooth and shining on both sides; germen stalked, egg-shaped, smooth.——A diminutive shrub, scarcely two inches above ground, with long branched roots: flowers in June: grows on the summits of the higher mountains of Scotland, England, and Wales. *Engl. Fl.* vol. iv. p. 200.

** *Adult leaves entire, nearly smooth.*

S. reticuláta. Wrinkled-leaved Willow. Leaves broadly elliptical, nearly circular, obtuse, entire, leathery, with reticulated veins, nearly smooth, glaucous beneath; germen sessile, downy.——A small shrub with stems two or three inches high, readily distinguished by its curiously reticulated leaves: flowers in June: grows on the higher

mountains of Scotland, Yorkshire, and Wales. *Eng. Bot.* vol. xxvii. pl. 1908. *Engl. Fl.* vol. iv. p. 200.

*** *Leaves hairy or silky.*

S. glaúca. Glaucous Mountain Willow. Leaves nearly entire, between lance-shaped and elliptical, even and nearly smooth above, woolly and white beneath; leaf-stalks decurrent; germen sessile, egg-shaped, woolly.——A shrub two or three feet high, with short, spreading, brown or yellowish branches: flowers in May: found on the Clova mountains, by Messrs. G. and D. Don. *Engl. Bot.* vol. xxvi. pl. 1810. *Engl. Fl.* vol. iv. p. 202.

S. Stuartiána. Small-leaved Shaggy Willow. Leaves nearly entire, between lance-shaped and egg-shaped, acute, shaggy above, densely silky beneath; style as long as the almost sessile, woolly germen; stigmas hair-like, deeply divided, as long as the style.——A bushy shrub, two or three feet high, with dark brown branches, downy when young: flowers in July and August: grows in the Highlands of Scotland. *Engl. Bot.* vol. xxvi. pl. 1809. *Engl. Fl.* vol. iv. p. 203.

S. arenária. Downy Mountain Willow. Leaves nearly entire, egg-shaped, acute; reticulated and somewhat downy above, veined and densely woolly beneath; style as long as the sessile, woolly germen; stigmas linear, deeply divided, as long as the style.——A small shrub, allied to *S. glauca:* flowers in May and June: grows on mountains in the Highlands of Scotland. *Engl. Bot.* vol. xxvi. pl. 1809. *Engl. Fl.* vol. iv. p. 204.

S. lanáta. Woolly Broad-leaved Willow. Leaves between egg-shaped and roundish, pointed, entire, shaggy on both sides, glaucous beneath; germen sessile, oblong, smooth; style four times as long as the blunt, divided stigmas.——A shrub, three or four feet high, with numerous, distorted branches, downy when young. Found by Mr. T. Drummond on rocks among the Clova mountains. *Engl. Fl.* vol. iv. p. 205.

S. argéntea. Silky Sand Willow. Leaves elliptical, entire, somewhat revolute, with a recurved point, rather downy above, silky and shining beneath, as well as the branches; stem erect; germen between lance-shaped and egg-shaped, silky; its silky stalk nearly as long as the linear oblong scale; style not longer than the stigmas.——A shrub, four or five feet high, with numerous silky branches. Flowers in May: grows on the sea-shore among loose sand. *Engl. Bot.* vol. xix. pl. 1364. *Engl. Fl.* vol. iv. p. 207.

S. fœtida. Fishy Willow. Leaves elliptical, nearly entire, with a recurved point, glaucous and silky beneath; stem recumbent; germen between egg-shaped and lance-shaped, one silky stalk nearly equal to the inversely egg-shaped scale.——A low creeping shrub, with long, straight, downy branches and a nauseous scent, like that of some fresh water fishes. Flowers in May: grows on moist heathy or sandy ground in England. *Engl. Bot.* vol. xxviii. pl. 1962, and pl. 1961. *Engl. Fl.* vol. iv. p. 208.

S. répens. Common Dwarf Willow. Leaves between elliptical and lance-shaped, straight, somewhat pointed, nearly entire, almost naked above, glaucous and silky beneath; stipules none; stem depressed, with short, erect branches; germen stalked, egg-shaped, downy; cap-

sules smooth.——A small shrub, with a prostrate stem, and numerous erect branches. Flowers in May: grows on sandy mountainous heaths; very common. *Engl. Bot.* vol. iii. pl. 183. *Engl. Fl.* vol. iv. p. 209.

S. fúsca. Brownish Dwarf Willow. Leaves between elliptical and oblong, acute, straight, flat, with a few glandular teeth, glaucous and silky beneath; stipules none; stem erect, much branched; germen sessile, nearly smooth, tapering into an elongated style.——A small bushy shrub, from six to twelve inches high, with brown branches, downy when young. Flowers in May; grows on moist mountainous heaths. *Engl. Bot.* vol. xxviii. pl. 1960. *Engl. Fl.* vol. iv. p. 210.

S. prostráta. Early Prostrate Willow. Leaves between elliptical and oblong, convex, somewhat toothed, with a curved point; glaucous, silky and veiny beneath; stipules minute; stem prostrate, with elongated, straight branches; germen stalked, egg-shaped, silky; style shorter than the stigmas.——Flowers in March and April; grows on heaths. *Engl. Bot.* vol. xxviii. pl. 1959. *Engl. Fl.* vol. iv. p. 211.

S. incubácea. Trailing Silk Willow. Leaves between elliptical and lance-shaped, pointed, straight, nearly entire; convex and smooth above, with prominent reticulated veins, glaucous and silky beneath; stem recumbent; catkins between egg-shaped and oblong; stalks of the silky germens longer than the scales; capsules smooth.——A small shrub with reclining or prostrate dark brown stems, about two feet long. Flowers in May: grows in sandy meadows; found by Mr. E. Forster at Hopton in Suffolk. *Engl. Fl.* vol. iv. p. 212.

S. Doniána. Rusty-branched Willow. Leaves lance-shaped, broadest towards the end, acute, straight, slightly serrate, livid and somewhat silky beneath; stem and branches erect; catkins cylindrical; germen stalked, silky, longer than the inversely egg-shaped, bearded scales. ——A shrub five or six feet high, with straight, reddish branches. Flowers in May; found in Scotland by Mr. G. Don. *Engl. Fl.* vol. iv. p. 213.

S. rosmarinifólia. Rosemary-leaved Willow. Leaves between linear and lance-shaped, pointed, straight, entire, silky beneath; stem erect; catkins egg-shaped, recurved; germen stalked, lance-shaped, silky. ——A slender shrub, two or three feet high, with erect, very slender branches, silky when young. Flowers in April: grows in moist sandy ground. *Engl. Bot.* vol. xix. pl. 1365. *Engl. Fl.* vol. iv. p. 214.

S. cinérea. Grey Sallow. Stem erect; lower leaves entire, upper serrate, lance-shaped, broadest towards the end; glaucous, downy and reticulated with veins beneath; stipules half heart-shaped, serrate; germen silky; its stalk half as long as the lance-shaped scales.——A tree twenty or thirty feet high, with smooth, reddish brown, crooked branches. Flowers in April: grows in moist woods and hedges. *Engl. Bot.* vol. xxvii. pl. 1897. *Engl. Fl.* vol. iv. p. 215.

S. aurita. Round-eared Willow. Branches spreading; leaves somewhat serrate, convex, inversely egg-shaped, obtuse, with a small hooked point, hairy and reticulated with veins on both sides. Stipules roundish, convex, toothed; germen silky, stalked; stigmas nearly sessile.——A bushy shrub, three or four feet high, with spreading or trailing branches, of a brown colour. Flowers in April and May: grows

in moist woods and thickets. *Engl. Bot.* vol. xxi. pl. 1487. *Engl. Fl.* vol. iv. p. 216.

S. aquática. Water Sallow. Stem and branches erect; leaves slightly serrate, elliptical, broadest towards the end, minutely downy, flat, rather glaucous beneath; stipules rounded, toothed; germen silky, stalked; stigmas nearly sessile.——A shrub or small tree, with numerous, erect branches. Flowers in April; grows in wet woods and hedges, in marshy places, and on the banks of rivers; very common. *Engl. Bot.* vol. xx. pl. 1437. *Engl. Fl.* vol. iv. p. 218.

S. oleifólia. Olive-leaved Sallow. Stem erect; branches straight, spreading; leaves lance-shaped, broadest towards the end, flat, rather stiff, minutely toothed, acute, glaucous, reticulated and finely hairy beneath; stipules small, notched, rounded; catkins oval, nearly half as broad as long.——A small tree, with round branches, when young brown and hoary. Flowers in March: grows in wet woods and hedges. *Engl. Bot.* vol. xx. pl. 1402. *Eng. Fl.* vol. iv. p. 219.

S. cotinifólia. Quince-leaved Sallow. Stem erect; branches spreading, downy; leaves broadly elliptical, nearly round, slightly toothed; glaucous and downy, with rectangular veins beneath; style as long as the linear, notched stigmas.——A shrub from two to eight feet high, with straight, brown, downy branches: flowers in April: grows in thickets and woods. *Eng. Bot.* vol. xx. pl. 1403. *Engl. Fl.* vol. iv. p. 220.

S. hírta. Hairy-branched Sallow. Stem erect; branches densely hairy; leaves elliptical, inclining to heart-shaped, pointed, finely crenate, downy on both sides; stipules half heart-shaped, flat, toothed; nearly smooth.——A small tree with thick, round, hoary branches. flowers in April and May: found in Norfolk by Mr. Crowe. *Engl. Bot.* vol. xx. pl. 1404. *Engl. Fl.* vol. iv. p. 221.

S. rupéstris. Silky Rock Sallow. Stem procumbent or depressed; leaves inversely egg-shaped, acute, serrate, flat, even, silky on both sides; stipules hairy; branches minutely downy; germen stalked, awl-shaped, silky; style as long as the blunt undivided stigmas.—— A small trailing shrub, with dark-coloured branches, downy when young: flowers in May: grows on rocks in the Highlands of Scotland. *Engl. Bot.* vol. xxxiii. pl. 2342. *Engl. Fl.* vol. iv. p. 222.

S. Andersoniána. Green Mountain Sallow. Stem erect; leaves elliptical, acute, finely notched, slightly downy, paler beneath; stipules half egg-shaped, nearly smooth; branches minutely downy; germen smooth, its stalk almost equal to the scale; style cleft, longer than the cleft stigmas.——A large shrub with dark brown branches, at first green and downy; flowers in April and May: grows in woods and on the banks of rivers in Scotland and the north of England. *Engl. Bot.* vol. xxxiii. pl. 2343. *Engl. Fl.* vol. iv. p. 223.

S. Forsteriána. Glaucous Mountain Sallow. Stem erect; branches minutely downy; leaves elliptical, broadest towards the end, acute, crenate, slightly downy; glaucous beneath; stipules rounded, recurved; germen stalked, awl-shaped, silky; style as long as the blunt notched stigmas.——A small tree, with downy branches: flowers in May: grows in woods and on the banks of rivers, in Scotland and

the north of England. *Engl. Bot.* vol. xxxiii. pl. 2344. *Engl. Fl.* iv. iv. p. 224.

S. sphacelàta. Withered-pointed Sallow. Stem erect; leaves between elliptical and inversely egg-shaped, entire, or slightly serrate, downy on both sides, discoloured at the point; stipules half heart-shaped, toothed, erect; germen stalked, lance-shaped, silky; stigmas notched, longer than the style.——A small bushy tree, six or eight feet high, the young branches covered with soft, whitish hairs: flowers in April and May: grows in valleys in the Highlands of Scotland. *Engl. Bot.* vol. xxxiii. pl. 2333. *Engl. Fl.* vol. iv. p. 224.

S. capréa. Great Round-leaved Sallow. Stem erect; leaves between egg-shaped and roundish, pointed, serrate, waved, pale and downy beneath; stipules somewhat crescent-shaped; catkins oval; germen stalked, egg-shaped, silky; stigmas nearly sessile, undivided; capsules swelling.——A tree of moderate size, with spreading, brown or purplish branches: leaves from two to three inches long: flowers in April: grows in woods and hedges; common. *Engl. Bot.* vol. xxi. pl. 1488. *Engl. Fl.* vol. iv. p. 226.

S. acuminàta. Long-leaved Sallow. Stem erect; leaves between lance-shaped and oblong, pointed, waved, finely toothed, glaucous and downy beneath; stipules half-egg-shaped, finely curved; catkins cylindrical; germen stalked, egg-shaped, hairy; style as long as the undivided stigmas.——A tree of moderate size, with spreading, minutely downy branches: flowers in April: grows in woods and on the banks of rivers; common. *Engl. Bot.* vol. xx. pl. 1434. *Engl. Fl.* vol. iv. p. 227.

S. viminàlis. Common Osier. Leaves linear, inclining to lance-shaped, elongated, taper-pointed, entire, waved, snow-white and silky beneath; branches straight and slender; germen sessile; style as long as the linear, undivided stigmas.——A tree, with very long, straight branches, downy when young. Cultivated for basket-work of various kinds: flowers in April and May; grows in wet meadows, and by rivers; common. *Engl. Bot.* vol. xxvii. pl. 1898. *Engl. Fl.* vol. iv. p. 228.

S. Smithiàna. Silky-leaved Osier. Leaves lance-shaped, pointed, slightly wavy, minutely toothed; soft and minutely downy above, whitish and silky beneath; stipules crescent-shaped, minute; catkins egg-shaped; germen stalked; style shorter than the linear, deeply divided stigmas.——Branches long, slender, erect, reddish, smooth, finely downy when soft: flowers in April and May: grows in meadows, and on the banks of rivers. *Engl. Bot.* vol. xxi. pl. 1509: *S. mollissima. Engl. Fl.* vol. iv. p. 229.

S. stipulàris. Auricled Osier. Leaves lance-shaped, pointed, slightly waved, obscurely crenate, soft and nearly naked above, white and downy beneath; stipules half heart-shaped, stalked, very large; nectary cylindrical; germen egg-shaped, nearly sessile, as well as the linear, undivided stigmas.——Twigs erect, long, soft, and downy, pale reddish-brown, brittle: flowers in March: grows in hedges and woods. *Engl. Bot.* vol. xvii. pl. 1214. *Engl. Fl.* vol. iv. p. 230.

S. álba. Common White Willow. Leaves between elliptical and lance-shaped, pointed, serrate, silky on both sides, the lowest serra-

tures glandular; stamens hairy; germen smooth, almost sessile; stigmas deeply cleft; scales rounded.——A tall tree with rugged bark and spreading branches, silky when young. Flowers in May: grows in moist woods, and on the banks of rivers and ditches. *Engl. Bot.* vol. xxxiv. pl. 2480. *Engl. Fl.* vol. iv. p. 231.

TRIANDRIA.

2. EMPETRUM.

Barren Flowers. Calyx deeply divided into three egg-shaped, permanent segments. Corolla of three oblong petals, larger than the calyx. Filaments from three to nine, hair-like, long, pendulous. Anthers roundish, deeply cleft, two-celled.

Fertile Flowers. Calyx deeply divided into three egg-shaped, permanent segments. Corolla of three oblong petals larger than the calyx. Germen superior, round, depressed. Style very short, erect. Stigmas nine, oblong, spreading. Berry globular, depressed, wider than the calyx, one-celled. Seeds nine, triangular, closely arranged in a circle.

E. nigrum. Common Crow-berry. Stem and branches procumbent, leaves between linear and oblong.——A small procumbent shrub, with numerous, slender branches: leaves fringed at the edges: flowers reddish, axillar: berries black. The berries are eaten by grouse and other birds. They are not unpleasant, and appear to be perfectly wholesome. Flowers in May: grows on heaths abundantly. *Engl. Bot.* vol. viii. pl. 526. *Engl. Fl.* vol. iv. p. 233.

3. RU'SCUS.

Barren Flowers. Calyx of six egg-shaped, spreading leaves; three alternate ones smaller. Corolla none. Nectary central, egg-shaped, erect, coloured, as long as the calyx. Filaments none. Anthers three, spreading, seated on the top of the nectary.

Perfect Flowers. Calyx, corolla, and nectary as above. Germen superior, oblong, concealed in the nectary. Style short and thick. Stigma obtuse, protruded through the orifice of the nectary. Berry globular, three-celled. Seeds seldom more than one, globular, hard.

R. aculeatus. Common Butcher's-broom. Leaves egg shaped, sharp-pointed, flowering on the upper side.——Stems round, furrowed, two feet high: flower solitary: berry scarlet. Perennial: flowers in March and April: grows on heaths and in woods. *Engl. Bot.* vol. viii. pl. 560. *Engl. Fl.* vol. iv. p. 235.

TETRANDRIA.

4. VI'SCUM.

Barren Flowers. Calyx a slight border. Corolla of one petal, deeply divided into four egg-shaped, acute, equal segments. Filaments none. Anthers four, egg-shaped, compressed, cellular, seated on the base of each segment of the corolla.

Perfect Flowers. Calyx a slight border. Corolla of four, egg-shaped, equal petals. Germen inferior, egg-shaped, crowned with the calyx. Style none. Stigma obtuse. Berry globular, smooth, juicy, viscid, one-celled. Seed one, heart-shaped, compressed, obtuse.

V. álbum. Common White Misseltoe. Leaves lance-shaped, broader towards the end, obtuse; stem forked; heads of flowers sessile.—— Root woody, thick: stem bushy, jointed, smooth, about a foot high: leaves stiff: flowers yellowish: berries white. Birdlime is made from the berries and bark. A perennial parasitical shrub, growing on the apple-tree, hawthorn, oak, and other trees: flowers in May. Common in Herefordshire and Worcestershire. *Engl. Bot.* pl. 1470. *Engl. Fl.* vol. iv. p. 236.

5. HIPPOPHA'E.

Barren Flowers. Calyx deeply divided into two roundish segments, at first folded flat together. Corolla none. Filaments four, very short, erect. Anthers oblong, angular, erect, two-celled, not longer than the calyx.

Fertile Flowers. Calyx of one leaf, inferior, tubular, cleft at the top, deciduous. Corolla none. Germen superior, small, roundish. Style short and thick. Stigma simple, oblong, protruded beyond the calyx. Berry globular, juicy, one-celled. Seed solitary, oblong, polished.

H. rhamnóides. Common Sallow-thorn. Sea Buck-thorn. Leaves between linear and lance-shaped, scattered.——A bushy shrub, about five feet high, with straight, spreading branches, each ending in a thorn: leaves dark green above, silvery beneath: flowers green: berries orange. Flowers in May: grows on cliffs on the east coast of England. *Engl. Bot.* vol. vi. pl. 425. *Engl. Fl.* vol. iv. p. 238.

6. MYRI'CA.

Barren Flowers. Catkin between egg-shaped and oblong, loosely imbricated all round. Calyx an egg-shaped scale. Corolla none. Filaments four, short, hair-like, erect. Anthers large, two-lobed.

Fertile Flowers. Catkin, calyx, and corolla as above. Germen egg-shaped, superior. Styles two, thread-shaped, spreading, longer than the calyx. Stigma acute. Berry one-celled. Seed one.

M. Gále. Sweet Gale. Dutch Myrtle. Leaves lance-shaped, broader towards the end, serrate; scales of the catkins pointed.——A shrub, from one to three feet high, with numerous alternate branches: berries very small. The whole plant exhales a rather pleasant aromatic odour. Flowers in May: grows in wet heaths, abundantly. *Engl. Bot.* vol. viii. pl. 562. *Engl. Fl.* vol. iv. p. 239.

PENTANDRIA.

7. HU'MULUS.

Barren Flowers. Calyx of five oblong, concave leaves. Corolla none. Filaments five, hair-like, very short. Anthers oblong, two-celled, with two terminal pores.

Fertile Flowers. Catkin of numerous large, membranous, imbricated scales. Calyx an oblique undivided scale. Corolla none. Germen superior, minute, oblong. Styles two, awl-shaped, spreading, downy. Stigmas simple. Seed one.

H. Lúpulus. Common Hop.—Stems herbaceous, twining, branched, angular, rough: leaves opposite, stalked, heart-shaped, serrate, veined, rough: flowers pale-green. The properties of the cones are well known. Perennial: flowers in July: grows in thickets and hedges. *Engl. Bot.* vol. vi. pl. 427. *Engl. Fl.* vol. iv. p. 288.

HEXANDRIA.

8. TA'MUS.

Barren flowers. Calyx none. Corolla regular, with six deep, broadly lance-shaped segments, their upper part spreading. Filaments six, awl-shaped, equal, shorter than the corolla. Anthers roundish.

Fertile flowers. Calyx none. Corolla regular, six-cleft, superior, deciduous. Germen inferior, between egg-shaped and oblong, large, smooth. Style cylindrical, as long as the corolla. Stigmas three, acute, spreading. Berry oval, three-celled. Seeds two in each cell.

T. communis. Common Black Bryony. Leaves heart-shaped, undivided. ——Root large, fleshy: stems twining: leaves bright green: flowers greenish-white: berries scarlet. Perennial: flowers in June: grows in hedges and woods, in England. *Engl. Bot.* vol. ii. pl. 91. *Engl. Fl.* vol. iv. p. 241.

OCTANDRIA.

9. PO'PULUS.

Barren Flowers. Catkin oblong, loosely imbricated, cylindrical. Calyx a one-flowered, wedge-shaped, flat scale, jagged at the edges. Corolla of one petal, turbinate beneath, tubular, dilated and obliquely cup-shaped above. Filaments eight or more, hair-like, very short. Anthers large, four-cornered.

Fertile Flowers. Catkin, calyx, and corolla as above. Germen superior, egg-shaped, pointed. Style none. Stigmas four or eight, awl-shaped. Capsules egg-shaped, two-valved, one-celled. Seeds numerous, small egg-shaped, downy at the top.

P. álba. White Poplar. Abele Tree. Leaves nearly triangular, somewhat heart-shaped at the base, toothed, cottony beneath; fertile catkin egg-shaped; stigmas four.——A tall tree, with smoothish bark and horizontal branches: leaves three-lobed, flowers in March: grows in moist woods. *Engl. Bot.* vol. xxiii. pl. 1618. *Engl. Fl.* vol. iv. p. 243.

P. canéscens. Grey Poplar. Leaves roundish, deeply waved,

toothed; hoary beneath; fertile catkins cylindrical; stigmas eight. ——A tall tree, with silvery smooth bark and ascending branches: flowers in March: grows near rivers and on dry heaths, in Norfolk. *Engl. Bot.* vol. xxiii. pl. 1619. *Engl. Fl.* vol. iv. p. 243.

P. trémula. Trembling Poplar. Aspen. Leaves nearly orbicular, toothed, smooth on both sides; leaf-stalks compressed; stigmas four. ——A rather tall tree, with smooth bark, remarkable for the fluttering motion of its leaves in the wind, caused by their compressed stalks: flowers in March and April: grows in woods, by the side of rivers, and in clefts of rocks. *Engl. Bot.* vol. xxvii. pl. 1909. *Engl. Fl.* vol. iv. p. 244.

P. nigra. Black Poplar. Leaves deltoid, acute, serrate, smooth on both sides; catkin, all loose and cylindrical; stigmas four.——A tall tree, with thick blackish bark, and smooth branches. Flowers in March: grows about the banks of rivers. *Engl. Bot.* vol. xxvii. pl. 1910. *Engl. Fl.* vol. iv. p. 245.

10. RHODI'OLA.

Barren Flowers. Calyx concave, deeply divided into four equal, obtuse, spreading segments. Petals four, lance-shaped, much longer than the calyx. Nectaries four, glandular, notched, opposite to the petals, shorter than the calyx. Filaments eight, awl-shaped, as long as the petals. Anthers roundish. Rudiment of four germens with abortive styles and stigmas.

Fertile Flowers. Calyx as above. Petals smaller. Nectaries as above. Stamens none. Germens four, superior, oblong, three-cornered. Styles short. Stigma obtuse. Capsules four, pointed, one-celled. Seeds numerous, roundish.

R. rósea. Rose-root.——Root thick and fleshy, smelling like roses: stems herbaceous, simple, from five inches to a foot high: leaves numerous, scattered, inversely egg-shaped, pointed, serrate at the end, fleshy, glaucous; cyme many-flowered, yellow. Perennial: flowers in May and June: grows on cliffs along the sea, and on high mountains; very common in the northern parts of Scotland and the Hebrides. *Engl. Bot.* vol. viii. pl. 508. *Engl. Fl.* vol. iv. p. 246.

ENNEANDRIA.

11. MERCURIA'LIS.

Barren Flowers. Calyx deeply divided into three egg-shaped spreading segments. Corolla none. Filaments from nine to twelve, hair-like, erect, nearly as long as the calyx. Anthers with globular lobes.

Fertile Flowers. Calyx and Corolla as above. Germen superior, roundish, compressed, with a furrow on each side, bristly. Styles two, *tapering*, rough, spreading. Stigmas acute. Capsule of two globular *lobes, two*-celled. Seeds solitary, globular.

M. perénnis. Perennial Mercury. Stem simple; leaves egg-shaped, serrate, rough; root creeping.——Stems about a foot high, square, leafy at the upper part: flowers in axillar spikes: poisonous. Perennial: flowers in April and May: grows in bushy or shady places, on banks, and by walls and hedges; common. *Engl. Bot.* vol. xxvi. pl. 1872. *Engl. Fl.* vol. iv. p. 248.

M. ánnua. Annual Mercury. Stem branched; branches opposite, crossing each other; leaves narrow egg-shaped, serrate, smooth; root fibrous.——Stem from six inches to a foot high, erect, bushy, smooth: flowers in axillar spikes: poisonous. Annual: flowers from June to September: grows in waste and cultivated ground; not common. *Engl. Bot.* vol. viii. pl. 559. *Engl. Fl.* vol. iv. p. 248.

12. HYDRO'CHARIS.

Barren Flowers. Calyx deeply divided into three oblong, equal segments, membranous at the edges. Petals three, roundish, undulated, much larger than the calyx. Filaments nine, awl-shaped, erect, in three rows, the middle row producing from its base an awl-shaped beak, the two other rows connected at the base and adhering to the beak. Anthers two-lobed, below the summits of the filaments.

Fertile Flowers. Calyx and petals as above. Germen inferior, roundish. Styles six, compressed, channelled, as long as the calyx. Stigmas cleft, acute. Capsule nearly globular, leathery, six-celled. Seeds numerous, roundish, minute.

H. Mórsus-ranæ. Common Frog-bit.——Root of long slender fibres: leaves stalked, kidney-shaped, purplish beneath, floating: flowers erect, large, white, yellow in the centre. Perennial: flowers in July: grows in ditches, and slow streams; not common. *Engl. Bot.* vol. xii. pl. 808. *Engl. Fl.* vol. iv. p. 250.

MONADELPHIA.

13. JUNI'PERUS.

Barren Flowers. Catkin conical, with three or more rows of whorled, imbricated, oval scales, three in each whorl, and one at the end. Corolla none. Filaments in the terminal flower three, awl-shaped, united at the base; in the other flowers hardly perceptible. Anthers three, two-lobed, in the terminal flower distinct, in the others fixed to the base of the scale.

Fertile Flowers. Calyx superior, with three very small permanent segments, united to the germen. Petals three, acute, stiff, permanent. Germen roundish. Styles three, very short. Stigmas simple. Berry roundish, with three small tubercles at its lower part, being the points of the calyx now united to the fruit, and three small teeth at the summit, originating from the petals. Seeds oblong, hard, convex externally, angular *internally*.

J. communis. Common Juniper. Leaves three in each whorl, thorn pointed, spreading, longer than the ripe fruit; stem erect.——A shrub, from two to five feet high, with very numerous branches; leaves linear, channelled and glaucous above; convex and keeled beneath; three in each whorl: flowers axillar, sessile, small: berries globular, bluish-black, sweetish, with a strong taste of turpentine. The berries are used in Holland in the distillation of gin. In this country oil of turpentine is employed for the same purpose. Flowers in May: grows on dry heaths. *Engl. Bot.* vol. xvi. pl. 1100. *Engl. Fl.* vol. iv. p. 251.

J. nana. Dwarf Alpine Juniper. Leaves three in each whorl, thorn-pointed, ascending, as long as the ripe fruit; stem recumbent. ——A small shrub, with prostrate stems: leaves more or less curved: berries much larger and more oval than in the other species. Flowers in May: grows on the higher mountains of Scotland; very abundant in the outer Hebrides, nearly as low as the level of the sea. *Engl. Fl.* vol. iv. p. 252.

14. TA'XUS.

Barren Flowers. Calyx none; excepting a bud. Corolla none. Filaments numerous, united at their lower part into a column longer than the bud. Anthers depressed, with eight rounded segments, opening all round at the base, afterwards becoming flat and peltate.

Fertile Flowers. Calyx minute, inferior, cup-shaped, afterwards enlarged, permament. Corolla none. Germen superior, egg-shaped, acute. Style none. Stigma obtuse. Berry formed of the enlarged, pulpy, coloured calyx. Seed one, oblong, projecting beyond the enlarged calyx.

J. baccata. Common Yew. Leaves two-rowed, linear, crowded. ——A tree with deciduous bark, and horizontal branches: leaves dark green, smooth and shining above, paler beneath: flowers axillar, solitary, each from an imbricated bud: berries scarlet. The wood is hard and tough, and is used for cabinet-work: the leaves are fetid and poisonous: the berries have a sweetish taste, and may be eaten with safety. It bears clipping, and forms excellent hedges. Flowers in March and April: grows in rocky places in Cumberland and Westmoreland: very rare in Scotland. *Engl. Bot.* vol. xi. pl. 746. *Engl. Fl.* vol. iv. p. 253.

Class XXIII. POLYGAMIA.

Flowers furnished with Stamens and Pistils, and others with Stamens only, or with Pistils only, on the same Plant, or on different Plants of the same Species.

Order I. MONŒCIA. *Flowers different on the same Plant.*

1. ATRIPLEX. *Perfect Flower. Calyx* inferior, with five deep segments. *Corolla* none. *Stamens* five. *Style* deeply cleft. *Seed* one, depressed.

Pistilliferous Flower. Calyx inferior, with two deep segments. *Corolla* none. Style deeply cleft. Seed one, compressed.

POLYGAMIA.—MONŒCIA.

1. ATRIPLEX.

Perfect Flowers. Calyx inferior, permanent, deeply divided into five equal, egg-shaped, concave segments, membranous at the edges. Corolla none. Filaments five, awl-shaped, as long as the calyx. Anthers round, two-lobed. Germen superior, round, often imperfect. Style short, deeply divided. Stigmas simple, spreading. Seed one, round, depressed, invested by a thin pellicle, and covered by the closed, permanent, five-cornered calyx.

Pistilliferous Flowers. Calyx inferior, deeply divided into two large, flat, egg-shaped segments. Corolla none. Stamens none. Germen superior, compressed. Style short, deeply divided. Stigmas spreading. Seed one, round, compressed, invested by a thin pellicle, and enclosed between the enlarged, heart-shaped leaves of the calyx.

A. portulacoides. Shrubby Orache. Sea Purslane. Stem shrubby, spreading; leaves lance-shaped, inclining to inversely egg-shaped, entire, tapering at the base.——Stems from one to two feet high, branched, ascending: leaves opposite, stalked, mealy: clusters axillar and terminal: flowers small, yellowish. A shrub: flowers in July and August: grows in muddy places on the sea-coast. *Engl. Bot.* vol. iv. pl. 261. *Engl. Fl.* vol. iv. p. 256.

A. laciniata. Frosted Sea Orache. Stem herbaceous, spreading; leaves between triangular and egg-shaped, widely toothed, mealy beneath.——Stems about a foot high, mealy, alternately branched: leaves alternate, stalked, entire at the base; perfect flowers in terminal, lobed clusters, their germens commonly about five: fertile flowers axillar, several together. Annual: flowers in July: grows in sand, on the sea-coast. *Engl. Bot.* vol. iii. pl. 165. *Engl. Fl.* vol. iv. p. 257.

A. pátula. Spreading Halbert-shaped Orache. Stem herbaceous, spreading; leaves between lance-shaped and triangular, somewhat halbert-shaped; calyx of the fruit tuberculated at the sides.——Stem and leaves dull green, slightly mealy, often reddish. Annual: flowers in June and July: grows in cultivated and waste ground. *Engl. Bot* vol. xiii. pl. 936. *Engl. Fl.* vol. iv. p. 257.

A. angustifólia. Spreading Narrow-leaved Orache. Stem herbaceous; leaves lance-shaped, entire, the lower ones three-lobed; calyx of the fruit halbert-shaped, slightly tuberculated at the sides.——Resembles the former, of which it is perhaps only a variety. Annual: flowers in July: grows in cultivated and waste ground. *Engl. Bot.* vol. xxv. pl. 1774. *Engl. Fl.* vol. iv. p. 259.

A. erécta. Upright Spear-leaved Orache. Stem herbaceous, erect; leaves broadly lance-shaped, the lower ones sinuate; calyx of the fruit covered with sharp tubercles.——Leaves alternate, stalked, slightly powdery: clusters terminal, erect, compound. Annual: flowers in August: grows in waste ground; very rare. *Engl. Bot.* vol. xxxi. pl. 2223. *Engl. Fl.* vol. iv. p. 259.

A. littorális. Grass-leaved Sea Orache. Stem herbaceous, erect; leaves all linear, entire or toothed; calyx of the fruit sinuated and covered on the back with sharp tubercles. Annual: flowers in August and September: grows on the sea-shore. *Engl. Bot.* vol. x. pl. 708. *Engl. Fl.* vol. iv. p. 260.

A. pedunculáta. Stalked Sea Orache. Stem herbaceous, undulated, spreading; leaves inversely egg-shaped, entire; seed-bearing flowers stalked, wedge-shaped.——Stem and leaves mealy. Annual: flowers in August and September: grows on the sea-coast. *Engl. Bot.* vol. iv. pl. 232. *Engl. Fl.* vol. iv. p. 261.

Class XXIV. CRYPTOGAMIA.

Plants presenting none of the characters of the preceding classes.

[This Class, which contains at least as many species as all the rest together, is divided into several Orders, of which only three are here given, the others being generally too difficult for beginners.]

Order I. FERNS.

*Plants consisting of a Frond, with dorsal or terminal fructification.**

* *Capsules in masses, or Sori, on the back of a leafy frond, each capsule two-valved, bound with a jointed, elastic ring.*

1. POLYPO'DIUM. *Sori* roundish, scattered. *Cover* none.
2. WOO'DSIA. *Sori* roundish, scattered. *Cover* fixed by a central stalk under each sorus, its margin divided into several hair-like segments.
3. ASPI'DIUM. *Sori* roundish, scattered. *Cover* round, fixed by the centre, separating all round.
4. CYSTE'A. *Sori* roundish, scattered. *Cover* round, concave, fixed beneath by a lateral point, finally jagged and reflected.
5. ASPLE'NIUM. *Sori* linear, scattered. Cover linear, opening at one side, towards the central rib or vein.
6. SCOLOPE'NDRIUM. *Sori* linear, scattered in pairs, between two parallel veins. *Covers* two, linear, opposite.
7. BLE'CHNUM. *Sori* linear, single, close to the central rib. *Cover* linear, flat, opening towards the rib.

* A few additional terms are employed in this order:—
A *frond* is a leaf bearing the fructification.
The *stalk* of the frond is the part which elevates it from the ground.
The *shaft* is the direct continuation of the stalk.
The *partial stalks* are the branches of the shaft.
The *central rib* is the rib or vein which runs along the middle of the ultimate divisions of the frond.
Sori, masses or groups of capsules, arranged on the back of the frond.
Covers, membranous coverings for the sori.

8. PTE'RIS. *Sori* linear, continuous, marginal. *Cover* formed of the inflected margin of the frond, opening inwards.
9. ADIA'NTUM. *Sori* oblong or roundish. *Covers* formed of separate portions of the margin turned in.
10. TRICHO'MANES. *Sori* oblong, imbedded in the edge of the frond. *Cover* marginal, pitcher-shaped, of one leaf, opening outwards.
11. HYMENOPHY'LLUM. *Sori* roundish, imbedded in the edge of the frond. *Cover* marginal, compressed, two-valved, opening outwards.

** *Capsules destitute of a ring, in terminal spikes.*

12. OSMU'NDA. *Cluster* branched. *Capsules* stalked, globular.
13. BOTRY'CHIUM. *Common stalk* compound, flattened.
14. OPHIOGLO'SSUM. *Spike* two-rowed.

Order II. LYCOPODINEÆ. *Plants having axillar or spiked Capsules upon Stems furnished with numerous small undivided leaves.*

1. LYCOPO'DIUM.

Order III. EQUISETACEÆ. *Plants having a terminal spike, consisting of angular scales bearing Capsules, containing numerous Seeds, each furnished with four Stamens.*

1. EQUISE'TUM.

Order I. FERNS. *Plants consisting of a Frond, with dorsal or terminal fructification.*

1. POLYPODIUM.

Sori roundish, convex, scattered over the back of the frond, in rows, between the central rib of each lobe and the margin. Cover none. Capsules very numerous, globular, on hair-like stalks, one-celled, two-valved, bound by a jointed ring. Seeds numerous, very minute.

* *Frond pinnatifid.*

P. vulgáre. Common Polypody. Frond deeply pinnatifid, with oblong, obtuse, somewhat serrate lobes; root scaly.——Frond from six inches to a foot high, between linear and lance-shaped. Perennial: bears fruit from May to November: grows on rocks, walls, dry banks, and trunks of old trees. *Eng. Bot.* vol. xvi. pl. 1149. *Engl. Fl.* vol. iv. p. 281.

** *Frond twice pinnatifid.*

P. Phegópteris. Pale Mountain Polypody. Fronds pinnate, with lance-shaped leaflets, united at the base, their segments obtuse: the two lowermost leaflets deflected; veins hairy; sori near the edges of the segments.——Root thread-shaped, slightly scaly: stalk long, slender, scaly, as well as the shaft and partial stalks: fronds a foot and a half high, minutely hairy, pale green. Perennial: bears fruit

in June and July: grows in the clefts of rocks. *Engl. Bot.* vol. xxii. pl. 2224. *Engl. Fl.* vol. iii. p. 282.

*** *Frond thrice compound.*

P. Dryópteris. Tender Three-branched Polypody. Fronds ternate, each division twice pinnate, loosely spreading, the segments obtuse, somewhat crenate; root and stalk thread-shaped; sori scattered, separate.——Fronds from six inches to a foot high, bright green, smooth and delicate. Perennial: bears fruit in July: grows in shady places. *Engl. Bot.* vol. ix. pl. 616. *Engl. Fl.* vol. iv. p. 283.

P. calcáreum. Stiff Three-branched Polypody. Fronds ternate, each division twice pinnate, erect, somewhat stiff, the segments obtuse, somewhat crenate; sori crowded, finally confluent.——Perennial: bears fruit in July: grows in rocky ground about Matlock-bath in Derbyshire. *Engl. Bot.* vol. xxii. pl. 1525. *Engl. Fl.* vol. iv. p. 283.

2. WOO'DSIA.

Sori roundish, convex, scattered on the veins at the back of the frond. Cover lying under the sorus, its margin deeply divided into taper-pointed segments, curved over the capsules, permanent. Capsules several, stalked, crowded, bound by a ring, and opening irregularly at the sides. Seeds numerous, kidney-shaped.

W. hyperbórea. Rounded-leaved Woodsia. Fronds lance-shaped, pinnate; leaflets heart-shaped, pinnatifid, their segments rounded. ——Fronds from three to five inches high. Perennial: grows on Snowdon in Wales, and Ben Lawers in Scotland. *Engl. Bot.* vol. xxix. pl. 2023: *Polypodium hyperboreum. Engl. Fl.* vol. iv. p. 323.

W. ilvénsis. Oblong-leaved Woodsia. Fronds lance-shaped, pinnate; leaflets oblong, pinnatifid with oblong segments.——Fronds from three to five inches high. Perennial: bears fruit from July to September: grows on rocks in Wales and the north of England. *Engl. Fl.* vol. iv. p. 322.

3. ASPI'DIUM.

Sori round, convex, scattered over the back of the frond, in rows, between the central rib of each lobe and the margin. Capsules very numerous, globular, on hair-like stalks, one-celled, two-valved, bound by a jointed ring. Seeds numerous, roundish, very minute.

* *Frond pinnate.*

A. Lonchítis. Rough Alpine Shield-fern. Frond between lance-shaped and linear, pinnate; leaflets crescent-shaped, lobed above at the base, bristly-serrate, the upper ones only bearing fruit; stalk scaly.——Fronds from six to nine inches high, deep green. Perennial: bears fruit in May and June: grows in clefts of the rocks in the Highlands of Scotland, and in Wales. *Engl. Bot.* vol. xii. pl. 797: *Polypodium Lonchitis. Engl. Fl.* vol. iv. p. 284.

** *Frond more or less twice pinnate.*

A. Thely'pteris. Marsh Shield-fern. Frond pinnate; leaflets between linear and lance-shaped, deeply pinnatifid, smooth, somewhat

crenate, their lower segments elongated; sori globular, finally confluent.——Fronds upwards of a foot high, deep green. Perennial: bears fruit in July: grows in marshes and boggy meadows; common. *Engl. Bot.* vol. xv. pl. 1018: *Polypodium Thelypteris. Engl. Fl.* vol. iv. p. 285.

A. Oreópteris. Heath Shield-fern. Frond pinnate; leaflets lance-shaped, entire, sprinkled on the back with resinous globules; sori nearly marginal, finally confluent——Fronds about a foot high, erect, lance-shaped, with very short, scaly stalks. Perennial: bears fruit in July: grows in dry woods and on heaths. *Engl. Bot.* vol. xv. pl. 1019: *Polypodium Oreópteris. Engl. Fl.* vol. iv. p. 286.

A. Filix-más. Male Shield-fern. Frond twice pinnate; leaflets oblong, obtuse, serrate; sori near the central rib; stalk and shaft scaly.——Fronds three feet high, erect, lance-shaped, with short stalks. Perennial: bears fruit in June and July: grows in woods and on shady banks; common. *Engl. Bot.* vol. xxi. pl. 1458. *Engl. Fl.* vol. iv. p. 288.

A. cristátum. Crested Shield-fern. Frond almost twice pinnate; leaflets decurrent, egg-shaped, obtuse, crenate or pinnatifid, with acute terminal teeth; sori in the middle, between the central rib and margins; stalk scaly at the base.——Fronds two feet high, erect, narrow, yellowish-green, with longish stalks. Perennial: bears fruit in August: grows on boggy heaths. *Engl. Bot.* vol. xxx. pl. 2125. *Engl. Fl.* vol. iv. p. 289.

A. aculeátum. Common Prickly Shield-fern. Frond twice pinnate; leaflets egg-shaped, pointed, stalked, somewhat crescent-shaped, fringed with prickly serratures; stalk and central ribs scaly.—— Fronds about two feet high, lance-shaped, dark-green. Perennial: bears fruit in July: grows in woods and shady places. *Engl. Bot.* vol. xxii. pl. 1562. *Engl. Fl.* vol. iv. p. 290.

A. anguláre. Angular-leaved Shield-fern. Frond twice pinnate; leaflets egg-shaped, bluntish, stalked, fringed with bristly serratures, each leaflet with a lateral lobe at the base, the lowermost elongated; stalk and ribs scaly.——Perennial: bears fruit in July: grows in woods and shady places. *Engl. Fl.* vol. iv. p. 291.

A. lobátum. Close-leaved Prickly Shield-fern. Frond twice pinnate; leaflets elliptical, pointed, decurrent, somewhat serrate; stalk and shaft scaly.——Perennial: bears fruit in July: grows on shady hedge-banks. *Engl. Bot.* vol. xxii. pl. 1563. *Engl. Fl.* vol. iv. p. 291.

A. spinulosum. Prickly-toothed Shield-fern. Frond somewhat triangular, smooth, twice pinnate; leaflets decurrent, elliptical, deeply serrate, with prickly teeth, their central rib undulated; stalk elongated, scaly at the base.——Fronds about a foot high, smooth, light green. Perennial: bears fruit in June and July: grows in marshy places: found by Withering on Birmingham heath and in Devonshire. *Engl. Bot.* vol. xxi. pl. 1460. *Engl. Fl.* vol. iv. p. 292.

A. dilatátum. Broad Sharp-toothed Shield-fern. Frond twice pinnate; leaflets deeply pinnatifid, their lobes deeply serrate, with prickly teeth; stalk and shaft scaly.——Fronds about two feet high, broad, bright green. *Perennial:* bears fruit in July and August: grows in

shady moist places and woods. *Engl. Bot.* vol. xxi. pl. 1461. *Engl. Fl.* vol. iv. p. 293.

A. dumetórum. Thicket Shield-fern. Frond twice pinnate, leaflets pinnatifid; lobes with terminal, sharp, prickly teeth; stalk scaly; cover round, flat, with a deep notch. Smaller than the last. Bears fruit in July: grows in bushy places. *Engl. Fl.* vol. iv. p. 294.

A. Filix-fœmina. Female Shield-fern. Frond twice pinnate; leaflets between oblong and linear, pinnatifid, serrate, pointless; stalk smooth; sori oblong.——Fronds about two feet high, lance-shaped, deep green. Perennial: bears fruit in June and July: grows in moist shady places; common. *Engl. Bot.* vol. xxi. pl. 1459. *Engl. Fl.* vol. iv. p. 295.

A. irriguum. Brook Shield-fern. Frond lance-shaped, twice-pinnate; leaflets oblong, deeply serrate, pointless; stalk four-cornered; cover roundish-oblong.——Similar to the last, but much smaller. Perennial: bears fruit in June and July: grows about the edges of springs: found near Tonbridge by Mr. T. F. Forster. *Engl. Bot.* pl. 2199. *Engl. Fl.* vol. iv. p. 296.

4. CYSTE'A.

Sori round, convex, variously scattered over the back of the frond, between the central rib of each leaflet or lobe and the margin. Capsules several, globular, on short stalks, each one-celled, two-valved, bound by a jointed ring. Seeds numerous, roundish, very minute. Cover white, round, concave, fixed by a narrow point at the side of each sorus beneath.

C. frágilis. Brittle Bladder-fern. Frond between oblong and lance-shaped, twice pinnate; leaflets egg-shaped, pinnatifid, the lobes toothed or serrate; partial stalks bordered; sori crowded.——Fronds from four to ten inches high, smooth, bright green: stalk slender, with a few scales at the base. Perennial: bears fruit in June and July: grows on wet shady rocks and in stony places. *Engl. Bot.* vol. xxiii. pl. 1587. *Engl. Fl.* vol. iv. p. 299.

C. dentáta. Toothed Bladder-fern. Frond between oblong and lance-shaped, twice-pinnate; leaflets egg-shaped, obtuse, pinnatifid; the segments oblong, obtuse, toothed; partial stalks bordered.——Fronds from four to ten inches high. Perennial: bears fruit in July: grows in the clefts of rocks, in Wales and the Highlands of Scotland. *Engl. Bot.* vol. xxiii. pl. 1588. *Engl. Fl.* vol. iv. p. 155.

C. angustáta. Deeply-cut Mountain Bladder-fern. Frond oblong; leaflets lance-shaped, decurrent, pinnatifid with linear, acute segments; sori scattered, remaining separate.——Fronds about a foot high, erect, with a long, blackish, naked stalk. Perennial: bears fruit in June and July: grows in rocks and in woods, in Scotland, Wales, and the north of England. *Engl. Fl.* vol. iv. p. 301.

C. régia. Laciniated Bladder-fern. Frond lance-shaped, twice pinnate; leaflets deeply pinnatifid; segments oblong, obtuse, partly notched; partial stalks winged; sori numerous, scattered, remaining separate.——Fronds from three to ten inches high, bright green. Pe-

rennial: bears fruit in June: grows on rocks and walls; rare. *Engl. Bot.* vol. iii. pl. 163: *C. incisa. Engl. Fl.* vol. iv. p. 303.

5. ASPLE'NIUM.

Sori linear, straight, parallel, scattered obliquely over the back of the fronds, between the central rib of each leaflet or lobe, and the next rib or vein. Cover membranous, continuous, straight, linear, arising from a vein, and opening at the opposite margin, towards the central rib or vein. Capsules numerous, globular, stalked, one-celled, two-valved, with a jointed ring.

A. Trichómanes. Common Maidenhair Spleenwort. Frond linear, pinnate: leaflets broadly oblong or roundish, crenate; stem and shaft coloured, shining, keeled beneath.——Fronds from four to eight inches high, with a brown stem and shaft, and dark green leaflets. Perennial: bears fruit from May to December: grows on shady rocks and walls; common. *Engl. Bot.* vol. viii. pl. 576. *Engl. Fl.* vol. iv. p. 305.

A. víride. Green Maidenhair Spleenwort. Frond linear, pinnate; leaflets obliquely egg-shaped, somewhat acute, widely and obtusely serrate; shaft-keeled beneath.——Fronds about five inches long, bright green: stalk reddish brown: shaft green. Perennial: bears fruit in June and July: grows on rocks, in the Highlands of Scotland, the north of England and Wales. *Engl. Bot.* vol. xxxii. pl. 2257. *Engl. Fl.* vol. iv. p. 306.

A. marínum. Sea Spleenwort. Frond lance-shaped, pinnate; leaflets obliquely egg-shaped, very obtuse, obtusely crenate; the shaft coloured along the back.——Frond about eight inches high, rather stout, firm, dark green: stem and the back of the shaft dark brown. Perennial: bears fruit in June and July: grows on rocks along the coast; common in Scotland. *Engl. Bot.* vol. vi. pl. 392. *Engl. Fl.* vol. iv. p. 307.

A. Ruta-murária. Wall-rue Spleenwort. Frond alternately twice compound; leaflets broadly diamond-shaped, notched on the two upper edges.——Fronds from two to four inches high. Perennial: bears fruit from June to October: grows on rocks and old walls; common. *Engl. Bot.* vol. iii. pl. 150. *Engl. Fl.* vol. iv. p. 309.

A. alternifólium. Alternate-leaved Spleenwort. Frond pinnate; leaflets alternate, wedge-shaped, notched at the end.——Fronds from three to six inches high, with brown shining stalks. Perennial: bears fruit from June to October: grows on rocks, near Kelso and Perth. Fronds having the above characters sometimes grow from the same root with others having the characters of *A. Ruta-muraria. Engl. Bot.* vol. xxxii. pl. 2258. *Engl. Fl.* vol. iv. p. 309.

A. Septentriondle. Forked Spleenwort. Fronds two or three-cleft; segments linear, pointed and jagged at the summit.——Fronds in a dense tuft, erect, consisting of a thread-shaped stalk, divided at the top into two or three narrow segments. Perennial: bears fruit from June to October: grows on rocks. *Engl. Bot.* vol. xv. pl. 1017. *Engl. Fl.* vol. iv. p. 308.

A. Adiántum-nigrum. Black Maidenhair Spleenwort. Frond between lance-shaped and triangular, alternately thrice pinnate; leaflets lance-shaped, pointed, deeply serrate.——Fronds about a foot high: stalks

scaly at the base, dark brown, shining. Perennial: bears fruit from June to October: grows on rocks, walls, and shady banks. *Engl. Bot.* vol. xviii. pl. 1950. *Engl. Fl.* vol. iv. p. 310.

A. lanceolátum. Green Lance-shaped Spleenwort. Frond lance-shaped, twice pinnate; leaflets and segments deeply toothed.——Fronds six or eight inches high: stalks brown at the base. Perennial: bears fruit from June to October: grows on rocks and old walls, in the south of England. *Engl. Bot.* vol. iv. pl. 240. *Engl. Fl.* vol. iv. p. 311.

A. fontánum. Smooth Rock Spleenwort. Frond between lance-shaped and linear; leaflets and segments wedge-shaped, deeply toothed; stem and partial stalks bordered.——Fronds from two to six inches high, very smooth. Perennial: bears fruit from June to September: grows on rocks and old walls; in England; very rare. Found by Mr. Bradney, on Amersham church, Bucks. *Engl. Bot.* vol. xxix. pl. 2024.

6. SCOLOPENDRIUM.

Sori linear, or somewhat oval, straight, in pairs, scattered obliquely over the back of the frond, each pair between two parallel veins. Covers membranous, continuous, linear, their edges folded over the capsules, finally separating. Capsules numerous, stalked, globular, two-valved, with a jointed ring. Seeds numerous, minute.

S. vulgáre. Common Hart's-tongue. Frond lance-shaped, heart-shaped at the base, smooth; stalk and shaft scaly.——Fronds a foot or more high, deep grass-green. Perennial: bears fruit in July: grows on rocks, walls, and banks. *Engl. Bot.* vol. xvi. pl. 1156. *Engl. Fl.* vol. iv. p. 314.

S. Ceterách. Scaly Hart's-tongue. Frond pinnatifid, scaly at the back.——Frond from three to six inches high, leathery, oblong, deep green. Perennial: bears fruit through the greater part of the year. *Engl. Bot.* vol. xviii. pl. 1244. *Engl. Fl.* vol. iv. p. 315.

7. BLE'CHNUM.

Sori linear, straight, continuous, parallel to the central rib on each side, at the back of each segment of the fertile fronds. Cover membranous, linear, continuous, arising from near the margin of the frond and opening towards the rib. Capsules numerous, stalked, globular, two-valved, with a jointed ring. Seeds numerous, minute.

B. boreále. Northern Hard-fern. Fronds smooth, pinnate, pectinate; leaflets linear, entire, dilated at the base.——Fronds about a foot high, some bearing fruit, others none: the latter narrow lance-shaped, tapering at the base, with hardly any stalk, their alternate leaflets slightly curved upwards: the former with much narrower leaflets, more dilated at the base, curved downwards, the stalk long and dark brown. *Engl. Bot.* vol. xvii. pl. 1159. *Engl. Fl.* vol. iv. p. 317.

8. PTE'RIS.

Sori linear, continuous, close to the margin, at the back of each segment of the fertile fronds. Cover membranous, continuous, formed by the inflected margin of the frond, opening at its inner edge. Capsules

numerous, stalked, globular, two-valved, with a jointed ring. Seeds numerous, minute.

P. aquilina. Common Brake. Frond thrice divided; divisions lance-shaped, their leaflets alternate, narrow-lance-shaped, pinnate, the uppermost entire; segments somewhat lance-shaped, obtuse.——Fronds from two to four feet high. It is used for thatching cottages, for which purpose it is better adapted than almost any of our native plants, excepting ling and broom. The ashes afford a pretty good alkali. Perennial: bears fruit in July and August: grows on heaths, and in pastures and woods; common. *Engl. Bot.* vol. xxiv. pl. 1679. *Engl. Fl.* vol. iv. p. 318.

P. crispa. Curled Brake. Barren frond alternately twice pinnate, with inversely egg-shaped, cut, or deeply crenate segments; fertile fronds thrice pinnate, with narrow, oblong segments.——Fronds from six to twelve inches high, with long slender stalks. Perennial: bears fruit from June to October: grows in stony mountainous places, in Scotland, the north of England and Wales. *Engl. Bot.* vol. xvii. pl. 1160. *Engl. Fl.* vol. iv. p. 319.

9. ADIA'NTUM.

Sori roundish, marginal, distinct, at the back of the frond, each attached to the centre of the under side of its cover, which is formed by the inflected margin of the frond. Capsules several, stalked, globular, two-valved, with a jointed ring. Seeds minute.

A. Capillis-Veneris. True Maidenhair. Frond twice compound; leaflets alternate, wedge-shaped, lobed on hair-like stalks.——Fronds from six to twelve inches high, with slender dark purplish stalks. Perennial: bears fruit from May to September: grows on rocks and walls; rare. *Engl. Bot.* vol. xxii. pl. 1564. *Engl. Fl.* vol. iv. p. 320.

10. TRICHO'MANES.

Sori oblong or roundish, terminal, imbedded in the margin, or segment, of the frond. Cover pitcher-shaped, of the same texture as the frond, and continuous with it, of one leaf, opening outwards, permanent. Capsules sessile, roundish, two-valved, with a jointed ring, crowded at the base of a cylindrical common receptacle, with a hair-like naked point projecting beyond the cover.

T. brevisétum. Bristle-fern. Frond thrice pinnatifid, smooth; segments linear, entire; stalk winged.——Fronds four or five inches high, oblong, with decurrent deep green segments. Perennial: bears fruit in May and June: found by Dr. Richardson at Belbank, near Bingley, Yorkshire. *Engl. Bot.* vol. xx. pl. 1417: *Hymenophyllum alátum. Engl. Fl.* vol. iv. p. 325.

11. HYMENOPHY'LLUM.

Sori roundish, terminal, imbedded in the segments of the frond. Cover compressed, of the same texture as the frond and continuous with it, of two equal valves, opening outwards, permanent. Capsules several, sessile, roundish, two-valved, with a jointed ring, [illegible]

the base of a permanent, cylindrical, common receptacle, with a hair-like point not projecting beyond the cover.

H. tunbridgénse. Tunbridge Filmy-fern. Frond tender, pinnate, smooth; the linear segments and covers acutely toothed; the shaft strongly winged.——Fronds two or three inches high, with hair-like stalks. Perennial: bears fruit in May and June: grows among moss in moist rocky places. *Engl. Bot.* vol. iii. pl. 162. *Engl. Fl.* vol. iv. p. 326.

H. Wilsóni. Scottish Filmy-fern. Fronds stiff, pinnate, the linear segments acutely toothed; covers entire; the shaft slightly margined.——Perennial: grows among moss in moist rocky places. *Brit. Fl.* p. 450.

12. OSMU'NDA.

Capsules clustered, distinct, stalked, nearly globular, one-celled, with two incomplete equal valves. Cover none. Seeds numerous, minute.

O. regális. Osmund Royal. Flowering-fern. Fronds twice pinnate; leaflets oblong, nearly entire, dilated at the base; clusters panicled, terminal.——Frond from two to three feet high: the most beautiful of our ferns. Perennial: bears fruit in June and July: grows in watery places; not common: frequent in the outer Hebrides. *Engl. Bot.* vol. iii. pl. 209. *Engl. Fl.* vol. iv. p. 327.

13. BOTRY'CHIUM.

Capsules distinct, sessile, on the upper side of a branched, flattened, common stalk, nearly globular, one-celled, with two equal valves. Cover none. Seeds numerous, minute.

B. Lunária. Common Moonwort. Stalk with a single pinnate leaf; leaflets kidney-shaped, entire.——From two to five inches high: stalk sheathed at the base, bearing a leaf about the middle, and terminating in a twice compound spike. Perennial: bears fruit in June and July: grows in dry pastures among short grass. *Engl. Bot.* vol. v. pl. 318: *Osmunda Lunaria. Engl. Fl.* vol. iv. p. 328.

14. OPHIOGLO'SSUM.

Capsules roundish, one-celled, two-valved, connate, in two opposite rows, upon a simple, linear, somewhat compressed spike. Cover none. Seeds numerous, minute.

O. vulgátum. Common Adder's-tongue. Leaf egg-shaped, about as long as the spike.——Stem slender, about eight inches high, bearing a simple leaf, and terminating in a slender spike, which would have some resemblance to the tongue of a snake, were the latter not forked. Perennial: bears fruit in May: grows in moist pastures. *Engl. Bot.* vol. ii. pl. 108. *Engl. Fl.* vol. iv. p. 330.

Order II. LYCOPODI'NEÆ. *Capsules axillar or spiked, with from one to three cells, and from two to three valves. Seeds numerous, very minute.*

LYCOPO'DIUM.

Capsules axillar, solitary, sessile, roundish, one-celled, two-valved. Seeds numerous, chaffy, very minute.

L. clavátum. Common Club-moss. Stem creeping, branched; branches ascending; leaves scattered, incurved, hair-pointed; spikes in pairs, cylindrical, stalked, with egg-shaped membranous leaves.——Stems several feet long: leaves crowded, narrow, and lance-shaped. The seeds explode when kindled, and are said to be used for artificial lightning on the stage. Perennial: bears fruit in July and August: grows on heaths. *Engl. Bot.* vol. iv. pl. 224. *Engl. Fl.* vol. iv. p. 331.

L. inundátum. Marsh Club-moss. Stem creeping, slightly branched; leaves scattered, narrow lance-shaped, pointless, entire; spikes solitary.——Stems three or four inches long. Perennial: bears fruit in June and July: grows in wet heathy places. *Engl. Bot.* vol. iv. pl. 239. *Engl. Fl.* vol. iv. p. 332.

L. selaginoides. Prickly Club-moss. Stems creeping, branches ascending, simple; leaves scattered, lance-shaped, fringed; spikes terminal, solitary, with broader leaves.——Stems short, the branches rising to the height of from two to four inches. Perennial: bears fruit in August: grows in watery places, in mountainous situations. *Engl. Bot.* vol. xvi. pl. 1148. *Engl. Fl.* vol. iv. p. 332.

L. Selágo. Fir Club-moss. Stems erect, forked, the branches level at the top; leaves in eight rows, uniform, narrow lance-shaped, acute, entire.——Stem from three to six inches high, forked from the base, four times. Perennial: bears fruit in July and August: grows near the summit of high mountains. *Engl. Bot.* vol. iv. pl. 233. *Engl. Fl.* vol. iv. p. 333.

L. annotínum. Interrupted Club-moss. Stems decumbent at the base; branches ascending, forked; leaves in five rows, narrow lance-shaped, acute, minutely serrate; spikes cylindrical, solitary, sessile. ——From six to eight inches high. Perennial: bears fruit in July and August: grows on the mountains of Scotland and Wales. *Engl. Bot.* vol. xxiv. pl. 1727. *Engl. Fl.* vol. iv. p. 334.

L. alpínum. Savin-leaved Club-moss. Stems prostrate; branches in tufts, erect, forked, level-topped; leaves acute, keeled, imbricated in four rows; spikes terminal, solitary, sessile, cylindrical, their leaves broadly lance-shaped, flat.——Perennial: bears fruit in August: grows on the higher mountains of Scotland, Wales, and the north of England. *Engl. Bot.* vol. iv. pl. 234. *Engl. Fl.* vol. iv. p. 335.

Order III. EQUISETACEÆ. *Fructification terminal, spiked, consisting of many peltate, angular, stalked scales, which bear at the back from four to seven oblong membranous cells, each containing numerous minute seeds, encompassed by four filaments, terminating in four flat anthers.*

EQUISETUM.

Spike oblong, of many peltate, stalked scales, arranged on a common stalk. Scales angular, bearing at the back from four to seven oblong membranous cells, parallel to each other, finally bursting into two equal valves. Seeds globular, very minute, having four spiral filaments attached to their base, which terminate each in a flat appendage or anther, producing pollen.

E. arvénse. Corn Horse-tail. Sterile stems decumbent at the base, with undivided, angular, roughish ascending branches; fertile stems erect, destitute of branches, their sheaths distant, deeply toothed.——Fertile stems about eight inches high, appearing before the sterile ones, which are from one to two feet high. Perennial: flowers in March and April: grows in fields and meadows; common. *Engl. Bot.* vol. xxix. pl. 2020. *Engl. Fl.* vol. iv. p. 337.

E. fluviátile. Great Water Horse-tail. Sterile stems with very numerous undivided, angular, roughish branches: fertile stems unbranched, their sheaths crowded, deeply toothed.——Fertile stems from one to two; sterile ones from two to four feet high. Perennial: flowers in April: grows at the edges of rivers and lakes. *Engl. Bot.* vol. xxix. pl. 2022. *Engl. Fl.* vol. iv. p. 337.

E. sylváticum. Wood Horse-tail. Sterile and fertile stems with compound, four-sided, smooth branches, curved downwards.——Stems about a foot high, erect, with short branches, each whorl with a pale brown torn sheath above it: spike oblong. Perennial: flowers in April and May: grows in moist woods. *Engl. Bot.* vol. xxvii. pl. 1874. *Engl. Fl.* vol. iv. p. 336.

E. limósum. Smooth Naked Horse-tail. Sterile and fertile stems naked, or branched at the upper part; the branches about fifteen in each whorl, simple, smooth, ascending.——Stems from two to three feet high, smooth to the touch, furrowed, sometimes branchless, more frequently branched: spike small, oblong. Perennial: flowers in June and July: grows in marshes and at the edges of lakes and rivers. *Engl. Bot.* vol. xiii. pl. 922. *Engl. Fl.* vol. iv. p. 339.

E. palústre. Marsh Horse-tail. Sterile and fertile stems deeply furrowed, branched throughout; branches about ten in each whorl, minutely roughish, erect.——Stems about two feet high: spike cylindrical. Perennial: flowers in June and July: grows in watery places. *Engl. Bot.* vol. xxix. pl. 2021. *Engl. Fl.* vol. iv. p. 338.

E. hyemále. Greater Rough Horse-tail. Sterile and fertile stems generally branchless, sometimes branched at the base, very rough, furrowed; sheaths whitish, black at the top and bottom, their teeth pointed, deciduous.——Stems from one to two feet high: spike elliptical. Perennial: flowers in July and August: grows in boggy woods; not common. The cuticle of all the Equiseta contains siliceous earth, on which account they are used for polishing wood and metals. This species is more eminently qualified for that purpose, and is largely imported from Holland. *Engl. Bot.* vol. xiii. pl. 915. *Engl. Fl.* vol. iv. p. 339.

E. variegátum. Variegated Rough Horse-tail. Stems branchless, very rough, branched at the base; sheaths black, with white, membranous, lance-shaped teeth.——Stems about eight inches high, ascending, furrowed. Perennial: flowers in July and August: found by Mr. G. Don on the sands of Barry, in Angus-shire. *Engl. Bot.* vol. xxviii. pl. 1987. *Engl. Fl.* vol. iv. p. 341.

GLOSSARY OF TERMS.

ABRUPT, with the extremity cut off, as it were, by a transverse line, f. 5, 54.
Abruptly pinnate, without a terminal leaflet or tendril, f. 79.
Acute, ending in a point, f. 57.
Acuminate, taper-pointed, f. 58.
Aggregate flowers, when several flowers, generally stalked, and with separated anthers, are inclosed in a common calyx.
Alternate, coming off one by one, in different directions, f. 22.
Alternately pinnate, with alternate leaflets, f. 80.
Anther, a bag containing pollen, f. 133.
Apple, a fleshy fruit, containing a capsule, f. 143.
Articulated stem or *leaf*, formed into distinct parts, united by portions of smaller diameter.
Arrow-shaped, triangular, hollowed at the base, f. 45.
Ascending, having an oblique direction upwards.
Awl-shaped, long, cylindrical at the base, and tapering to a point, f. 72.
Awn, an elongated stiff acute body upon the flowers of grasses, f. 96.
Axillar, growing between a leaf and the stem or branch, or between a branch and the stem.

Barbed or *Bearded*, having a tuft of long hairs.
Barren flowers, having stamens but not pistils, and therefore not producing fruit.
Bell-shaped, of the form of a bell, with the margin turned outwards, f. 120.
Berry, a juicy fruit containing seeds imbedded in its pulp, f. 144.
Bigeminate, twice paired.
Binate leaf, when two leaflets rest upon a common stalk, f. 74.
Bipinnate, twice pinnate.
Biternate, twice ternate.
Bractea, a leafy appendage to the flower, or its stalk, f. 85, *a*. f. 86, *a*.
Branches, divisions of the stem.
Bristly, covered with short stiff hairs.
Bristle-pointed, terminated by a bristle, or bristly point, f. 59.
Bristle-shaped, long, cylindrical at the base, tapering and very slender.
Bristles, short, stiff hairs.
Border, the expanded part of the petal, f. 125, *b*.
Bulbous root, with an enlarged globular part, and numerous fibres, f. 6, 7, 8.
Bundle, flower-stalks of equal length, growing close together, f. 100.

Caducous calyx, falling off before the corolla.
Calyx, the outer, generally green covering of a flower, f. 109, *b*.
Capsule, a dry seed-vessel, generally of a membranous texture, f. 137.
Cartilaginous, thick and tough.
Catkin, a long simple flower-stalk thickly covered with scales and flowers, f. 105.
Cauline, growing on the stem, f. 23, 24.

Chaffy, covered with membranous scales.
Chaff-scale, the calyx of grasses and allied plants.
Channelled leaves or stalks, with a longitudinal groove, f. 70.
Ciliated, fringed with hairs, f. 64.
Clammy, covered with glutinous juice.
Claw, the narrow portion of a petal, f. 125, *a*.
Cleft, deeply divided, f. 51.
Climbing, ascending on other bodies.
Clinging, holding fast to another body for support, f. 12.
Close-pressed, lying flat.
Cluster, numerous flowers, each on a stalk, arranged along a common stalk, f. 97, 98.
Clustered leaves, crowded together, f. 25.
Coloured calyx, of any other colour than green.
Coated Bulbous-root, composed of layers, f. 7.
Common calyx, containing several flowers with united anthers.
Common corolla, consisting of several flowers with united anthers, contained in a common calyx.
Common or *general umbel*, the first divisions of an umbel.
Common involucre, at the base of a general umbel, f. 89, *a*.
Complete flower, furnished with both calyx and corolla.
Compound flower, when a number of flowers with united anthers grow in a common calyx.
Compound leaf, consisting of several pieces, connected by insertion into a common stalk.
Compressed, flattened laterally.
Connate, adhering together, f. 31.
Cone, a catkin hardened and enlarged, f. 146, 147.
Conical receptacle, elevated and coming to a point, f. 155.
Conjugate leaf, with two leaflets.
Corolla, the envelope of coloured and delicate leaves of a flower.
Corymb, an erect cluster, the partial stalks of which are gradually longer as they stand lower on the common stalk, f. 99.
Cotyledons, the two portions of a seed which at germination change into leaves, f. 148.
Cover, a membranous covering for the sori of ferns.
Creeping root, one with a subterranean stem, sending off fibres at intervals, f. 2.
Creeping stem, running along the ground, and sending down roots at intervals, f. 11.
Cruciform corolla, of four petals, with long claws, standing opposite in pairs, f. 126.
Cup-shaped, of the form of a bell, with the margin straight, f. 121.
Curled, with the margin folded and more expanded than the disk.
Cylindrical, round and elongated.
Cyme, a kind of umbel, the partial stalks of which are irregular.

Deciduous leaves, falling off every year.
Deciduous calyx or corolla, falling off before the fruit is perfected.
Decumbent stem, lying on the ground at the base.
Decurrent leaves, running down the stem or branch, so as to form a leafy border, f. 34.
Decurrently pinnate, when the leaflets run down the stalk.
Decussate leaves, in pairs, alternately crossing, f. 29.

Depressed, flattened vertically.
Depressed leaves, root-leaves pressed close to the ground.
Digitate, several leaflets resting on the top of a common stalk, f. 73.
Dioecious, when stameniferous flowers grow on one plant, and pistilliferous flowers on another plant of the same species.
Disk, the central florets of a compound flower.
Dorsal, on the back.
Downy, covered with soft fine hairs.
Drupe, a fleshy fruit, containing a nut, f. 142.

Egg-shaped, longer than broad, the base broader than the end; when applied to the leaf, bractea, petal, &c, the term merely implies that these flat parts have the outline of an egg, f. 36; but when applied to a seed or capsule, it means that they are truly of the form of an egg.
Elliptical, the length greater than the breadth, and both ends rounded, f. 37.
Embracing the stem, leaves sessile and clasping the stem at their base, f. 30.
Emersed, standing out of the water.
Entire, without division, or without teeth or notches on the edges, f. 36, 43.
Equal, all of the same length, f. 117, 120.
Equitant leaves, disposed in two opposite rows, and embracing each other at the base, f. 33.
Erect, rising perpendicularly.
Even, destitute of inequalities.
Evergreen leaves, remaining green during the winter.

Feathery seed-down, consisting of hairs which are subdivided like the shaft of a feather, f. 150.
Fertile flower, having pistils but not stamens.
Fibrous root, consisting entirely of fibres or radicles, f. 1.
Fleshy, thick and juicy.
Flat receptacle, perfectly even, f. 154.
Filament, the stalk which supports the anther, f. 135, *a*.
Flexuous, forming angles from right to left, and inversely.
Floating leaves or stems, lying flat on the surface of the water.
Flower-stalk, a slender body which supports the flower, f. 19.
Floral leaf, an appendage to the flower or its stalk, f. 85, *a*. 86, *a*.
Follicle, a one-valved, one-celled capsule, opening lengthwise.
Forked, regularly and repeatedly dividing into two, f. 10.
Four-ranked, with leaves or branches spreading in four directions.
Fringed, margined with a row of hairs, f. 64.
Frond, a leaf bearing the fructification.
Furrowed, marked with parallel elevated and depressed lines.

Gaping corolla, an irregular corolla, with two lips and an open throat, f. 123.
Geniculate straw, with the joints enlarged and bent like a knee, f. 18.
Germen, the undermost part of the pistil, f. 136, *a*.
Glands, small soft bodies secreting fluids.
Glaucous, covered with a pale greenish-blue mealiness.
Gnawed, irregularly notched at the margin.

Granulated root, consisting of small bulbs or scales, f. 9.
Grooved, marked with parallel deep lines.

Hair-shaped, long, cylindrical and slender.
Hairs, slender bodies of various degrees of fineness, covering the surface of plants.
Hairy, covered with long, soft, straight hairs.
Halberd-shaped, triangular, hollowed out at the base and sides, with a projecting part on each side, f. 46.
Head, flowers arranged sessile in a globular form, f. 101.
Heart-shaped, egg-shaped with the base hollowed out, f. 44.
Hemispherical, of the form of a half-sphere, f. 114.
Herbaceous, soft, in opposition to woody.
Hoary, covered with close, extremely fine, white hairs.
Hollow stem or *leaves*, cylindrical, with an internal cavity.
Horizontal branches or leaves, standing off at right angles.
Husk, the corolla of grasses, f. 116, *b*.

Imbricated leaves or other organs, one lying over the other, f. 98, 113, 114.
Immersed, under water.
Incomplete flower, when the corolla is wanting.
Incumbent anther, lying across the top of the filament, f. 134.
Inflected, bent inwards.
Inflorescence, the manner in which the flowers are arranged.
Interruptedly pinnate, with smaller leaflets between the larger.
Inversely egg-shaped or heart-shaped, with the broad end outermost.
Involucre, a kind of bractea consisting of several leaves, at a distance from the flower, f. 88.
Involute, rolled inwards at the margin, f. 66.
Irregular corolla, not uniform in its general form, f. 123, 124.

Jagged, irregularly cut at the margin, f. 63.
Jointed, composed of distinct pieces united by intermediate parts.

Keel of a papilionaceous corolla, the lower boat-shaped piece, f. 131.
Keeled leaves or other parts, with a longitudinal prominence at the back, f. 71.
Kernel, the seed of a nut.
Kidney-shaped, roundish, with the base hollowed out, f. 43.
Kneed straw, with the joints enlarged and bent like a knee, f. 18.
Knobbed stigma, of a somewhat globular form.
Knotty, leaving knots at intervals.

Lamina, the expanded part of a petal, f. 125, *b*.
Lance-shaped, oblong and narrow, tapering toward each end, f. 40.
Lateral anther, attached to the side of the filament.
Lateral leaves, from the sides of the stem or branches.
Leaf-stalk, the stalk of a leaf.
Leathery, thin but tough.
Legume, a dry elongated seed-vessel, formed of two oblong valves, without a longitudinal part, f. 140.
Ligule, the stipule of grasses.
Linear, flat, very narrow, with the edges parallel, f. 41.

Lobed, divided into segments with rounded margins, f. 52.
Lyre-shaped, pinnatifid, with the terminal segment rounded and larger, f. 48.

Membranous, very thin, dry, and easily torn.
Monœcious, when stameniferous flowers and pistilliferous flowers exist on the same plant.
Monopetalous corolla, consisting of one petal or piece, f. 117.

Naked flower, destitute of a calyx.
Naked stem or leaf, without hairs.
Nectary, a part of the flower which contains or secretes honey.
Needle-shaped, leaves, linear and ever-green.
Neutral flowers, destitute of both stamens and pistils.
Notched leaf, or petal, ending with a small notch, f. 56.
Nut, a seed covered with a hard shell, which does not burst, f. 141.

Obtuse, rounded at the end.
Oblong, when the length is three or four times greater than the breadth, and the end rounded.
Opposite leaves, or other parts, coming off on opposite sides at the same place, f. 23.
Oppositely pinnate leaf, with opposite leaflets, f. 77, 78, 79.
Orbicular, round and flat.
Oval, the length greater than the breadth, and both ends alike rounded, f. 37.

Palmate leaf, having several oblong segments extending to the middle, f. 53.
Panicle, when the flowers are in a kind of loose subdivided cluster, f. 104.
Panicled stem, with irregular branches which are themselves irregularly divided, the last divisions bearing flowers.
Papilionaceous corolla, of four petals, resembling a butterfly, f. 128.
Papillous, covered with small soft prominences,
Partial involucre, at the base of a partial umbel.
Partial umbel, the secondary division of an umbel.
Pectinate, pinnatifid, with the segments very narrow, f. 50.
Pedate leaf, a ternate leaf, having its lateral leaflets divided into several others, f. 76.
Peduncle, a slender body by which the flower is connected with the stem or branch.
Peltate leaf, when the stalk is inserted into the middle, f. 35.
Pendulous, hanging.
Perfect flowers, having both stamens and pistils.
Perfoliate, when the stem, as it were, runs through a leaf, f. 32.
Perianth, a calyx contiguous to the corolla, or other internal parts of the flower, f. 110.
Pericarp, the seed-vessel.
Permanent leaves, remaining unaltered during winter.
Persistent calyx, or *corolla*, remaining until the fruit is ripe.
Personate corolla, irregular, with two lips, and a closed throat, f. 124.
Petals, the distinct pieces of a corolla.
Pinnate, when several leaflets proceed from a common stalk, f. 78, 80.

Pinnatifid, cut transversely into several oblong segments, f. 47.
Pistil, an organ consisting of three parts, occupying the centre of the flower, f. 136.
Pithy, having the central part filled with pith.
Plaited, folded so as to present alternately projecting and retiring angles, f. 69.
Pod, a long dry seed-vessel of two valves, separating by a longitudinal partition, to the edges of which the seeds are alternately attached, f. 138.
Polished, smooth and reflecting light.
Pollen, the dust or minute globules contained in the anther.
Polypetalous, consisting of several distinct pieces or petals.
Pores, small cavities or holes.
Pouch, a short pod, f. 139.
Prickle, an acute appendage arising from the bark, f. 92.
Prickly, covered with prickles.
Procumbent, lying on the ground.

Quadrangular, flat and four-cornered.
Quinate leaf, compound with five leaflets.
Quinquangular, flat with five corners.

Raceme, numerous flowers, each on a stalk, arranged along a common stalk, f. 97, 98.
Radiating flowers, having the marginal florets long and spreading.
Radical leaves, growing from the root, f. 19.
Ray, the marginal elongated florets of a compound flower.
Receptacle, the point at which all the parts of a flower meet.
Reclinate leaves, inclining downwards.
Reflected, bent backwards.
Regular corolla, uniform in its general figure, f. 126, 127.
Remote leaves, scales, &c. widely separated.
Retuse leaf or *petal*, ending in a broad shallow notch, f. 55.
Revolute, rolled back at the margin, f. 66.
Rhombic, diamond-shaped.
Ribbed leaf, when the vessels extend in undivided lines, f. 68.
Ribs, elevated lines.
Ringent corolla, the limb divided into two parts, leaving an open throat, f. 123.
Rough, covered with hairs.
Roundish leaves or petals, when the length and breadth are nearly equal.
Rosaceous corolla, of five equal roundish petals, f. 127.
Runcinate, pinnatifid, with the segments pointed, and directed downwards, f. 49.

Salver-shaped corolla, with a long cylindrical tube and expanded limb, f. 117.
Scaly stem, covered with scales, f. 15.
Scape, a flower-stalk arising from the root.
Scattered, irregularly distributed.
Scattered leaves or scales, irregularly distributed, f. 24.
Seed-down, a bristly crown attached to the seed.
Segments, the divisions of an organ.
Semicylindrical, elongated, flat on one side, and round on the other.

Serrate, with sharp close teeth, pointing in one direction, f. 61.
Shaggy, covered with very long, soft hairs.
Sheath, a membranous covering inclosing the flower, and afterwards bursting longitudinally, f. 87.
Sheath of the leaf, the lower part of the leaf of a grass, which incloses the straw.
Sheathing, investing the stem with a sheath.
Shining, reflecting light strongly.
Simple, undivided, or consisting of one.
Simple leaf, consisting of one piece.
Simple flower, when a single flower is contained in the calyx.
Simple Seed-down, consisting of undivided hairs, f. 149.
Smooth, destitute of hairs.
Solid, not hollow.
Solitary flower, one only in the same place, or on the stem.
Sori, masses or groups of capsules, arranged on the back of the frond in ferns.
Spatulate, circular at the end, and tapering towards the base, f. 38.
Spherical, of the form of a sphere, f. 113.
Spike, numerous flowers arranged along a common stalk, without partial stalks, f. 94, 95.
Spiked flowers, arranged in the form of a spike.
Spiked panicle, a very close panicle resembling a spike.
Spikelet, a term applied to grasses and other plants, which have many flowers arranged on a stalk within a common calyx, f. 96.
Spindle-shaped root, thick and fleshy, tapering downwards, f. 3.
Spine, an acute appendage, arising from the wood, f. 91.
Spreading branches or leaves, coming off at a moderately acute angle.
Spur, a horn-shaped production of the corolla, f. 132.
Stalk or *scape*, a stem that supports flowers but not leaves.
Stamens, organs of the flower, consisting of a bag filled with powder, and generally supported on a stalk.
Standard, the upper petal of a papilionaceous corolla, f. 129.
Stemless plants, having no stem properly so called.
Stigma, the top of the style, f. 136, *c*.
Stipule, an appendage to the leaf, f. 84.
Strap-shaped, narrow and flat.
Straw, the stem of grasses, rushes, and allied plants.
Striated or streaked, marked with parallel lines.
Strobilus, a catkin hardened and enlarged, f. 146, 147.
Style, a stalk supporting the stigma, f. 136, *b*.
Subdivided stalk, bearing several flowers.
Submersed, under water.
Sword-shaped leaves, perpendicular, two-edged and slightly convex on both surfaces.

Tail, an elongated appendage to a seed, f. 152.
Tapering root, thick and fleshy, tapering downwards, f. 3.
Tendril, a thread-like organ, serving to attach plants to some support, f. 78, 90.
Terminal, at the end of the stem or branch.
Ternate leaf, when three leaflets rest upon a common stalk, f. 75.
Thorn, an acute appendage, arising from the wood, f. 91.
Thread-shaped, elongated, cylindrical and slender.

Three-edged stem, with three sharp angles.
Thrice pinnate, divided three times in a pinnate manner, f. 83.
Thyrsus, a close panicle of an oval form.
Toothed leaves or other parts, having small protuberances on the margin, f. 60.
Triangular leaf, flat, with three angles, f. 42.
Trigeminate, thrice paired, f. 81.
Triternate, thrice ternate, f. 82.
Trunk, the stem of a tree or shrub.
Tubular, cylindrical and hollow.
Tufted leaves, several springing from one point, f. 27.
Tumid, bulging out.
Turbinate, spherical and depressed.
Twining, winding round other bodies, f. 13.
Two-edged stem, compressed with two opposite sharp edges.
Two-ranked, with leaves or branches spreading in two opposite directions.

Umbel, flower-stalks of nearly equal length, arising from a common centre, f. 89, 102.
Umbellules, the secondary divisions of an umbel.
Undivided, without segments.
Undulated, having a waved margin, f. 55.
Unequal, some longer than others.
Unilateral, all inclining one way.

Veined, with a network of prominent vessels, f. 67.
Veins, branching vessels.

Warty, covered with small hard prominences.
Wedge-shaped, broad at the end and tapering towards the base, f. 29.
Wheel-shaped corolla, with a short tube, and expanded limb.
Whorl, when several flowers encircle the stem, f. 93.
Whorled leaves or flowers, growing in a circle round the stem.
Wing of a seed, a dilated membranous appendage, f. 153.
Wings, the lateral pieces of a papilionaceous corolla, f. 130.
Winged stem, with edges extended into leafy borders.
Woody, hard and solid.
Woolly, covered with long, soft, interwoven hairs.
Wrinkled leaves, when the veins are tighter than the substance between them, so that the latter is puckered.

ALPHABETICAL INDEX

TO

THE LATIN GENERIC NAMES.

Acer . . 166, 172
Aceras . . 314, 317
Achillea . . 286, 312
Aconitum . 211, 217
Acorus . . 149, 155
Actæa . . 210, 211
Adiantum . 365, 371
Adonis . . 211, 220
Adoxa . . 167, 174
Ægopodium 101, 137
Æthusa . . 101, 134
Agrimonia . 194, 196
Agrostemma 176, 191
Agrostis . . 49, 62
Aira . . . 49, 64
Ajuga . . 225, 226
Alchemilla . 85, 93
Alisma . . 150, 165
Allium . . 149, 151
Alnus . . 324, 337
Alopecurus . 48, 60
Althæa . . 262, 265
Alyssum . 246, 249
Amaranthus 324, 339
Anagallis . 98, 109
Anchusa . . 94, 104
Andromeda 175, 177
Anemone . 211, 219
Angelica . 101, 138
Anthemis . 286, 311
Anthericum 149, 154
Anthoxanthum 39, 47
Anthriscus . 101, 129
Anthyllis . 266, 270
Antirrhinum 226, 241
Apargia . . 284, 289
Apium . . 101, 137
Aquilegia . 211, 218
Arabis . . 247, 254
Arbutus . . 175, 177
Arctium . . 284, 295
Arenaria . 176, 187
Artemisia . 285, 301
Arum . . 325, 341
Arundo . . . 50, 66
Aristolochia 315, 322
Asarum . . 194, 195
Asparagus . 149, 154
Asperugo . . 98, 105
Asperula . . 84, 87
Aspidium . 364, 366
Asplenium . 364, 369
Aster . . 286, 307
Astragalus . 267, 276
Athamanta . 100, 139
Atriplex . 362, 363
Atropa . . 98, 117
Avena . . . 50, 78
Azalea . . 98, 109
Ballota . . 225, 234
Barbarea . 247, 257
Bartsia . . 225, 238
Bellis . . 285, 309
Berberis . . 148, 160
Beta . . . 99, 124
Betonica . 225, 232
Betula . . 325, 343
Bidens . . 284, 299
Blechnum . 365, 370
Borago . . 97, 105
Botrychium. 365, 372
Brassica . 247, 259
Briza . . 49, 72
Bromus . . 50, 76
Bryonia . 324, 340
Buffonia . 85, 93
Bunium . . 100, 132
Bupleurum . 100, 141
Butomus . . 175
Buxus . . 324, 338
Cakile . . 247, 253
Callitriche . 35, 38
Calluna . . 166, 170
Caltha . . 211, 224
Camelina . 246, 249
Campanula . 99, 111
Cardamine . 247, 254
Carduus . . 284, 296
Carex . . 323, 329
Carlina . . 284, 298
Carpinus . 325, 344
Carum . . 101, 139
Caucalis . 100, 129
Centaurea . 286, 313
Centunculus . 84, 91
Cerastium . 176, 192
Ceratophyllum, 325, 340
Chara . . 35, 37
Chærophyllum 101, 131
Cheiranthus 247, 259
Chelidonium 210, 211
Chenopodium 99, 123
Cherleria . 176, 188
Chlora . . 166, 169
Chrysanthemum, 285, 310
Chrysocoma 285, 300
Chrysosplenium, 175, 178
Cichorium . 284, 295
Cicuta . . 101, 134
Cineraria . 286, 308
Circæa . . 39, 40
Cistus . . 210, 215
Cladium . 39, 46
Clematis . 211, 219
Clinopodium 225, 235
Cnicus . . 284, 297
Cnidium . 100, 140
Cochlearia . 246, 252
Colchicum . 149, 164
Comarum . 198, 209
Conium . . 100, 135
Convallaria . 149, 155
Convolvulus 98, 110
Conyza . . 285, 304

Corallorhiza 315, 321
Cornus . . 84, 92
Corrigiola . 102, 145
Corylus . . 325, 344
Cotyledon . 176, 189
Crambe . . 246, 253
Crepis . . 284, 293
Crithmum . 100, 136
Crocus . . 48, 52
Cuscuta . . 99, 126
Cyclamen . 98, 107
Cynodon . 49, 63
Cynoglossum 98, 104
Cynosurus . 50, 73
Cyperus . . 48, 54
Cypripedium 315, 322
Cystea . . 364, 368

Dactylis . 50, 72
Daphne . . 167, 171
Daucus . . 100, 131
Delphinium 210, 217
Dentaria . 247, 253
Dianthus . 176, 183
Digitalis . 226, 243
Digitaria . 49, 63
Diotis . . 285, 300
Dipsacus . 84, 85
Doronicum . 285, 309
Draba . . 246, 248
Drosera . . 102, 147
Dryas . . 198, 209

Echinophora 100, 128
Echium . . 97, 106
Elatine . . 167, 174
Eleocharis . 48, 56
Elymus . . 50, 80
Empetrum . 345, 357
Epilobium . 166, 167
Epimedium . 84, 91
Epipactis . 315, 320
Equisetum . 365, 373
Erica . . 166, 171
Erigeron . 285, 304
Eriocaulon . 324, 339
Eriophorum . 48, 57
Erodium . 261, 262
Ervum . . 267, 275
Eryngium . 101, 127
Erysimum . 247, 258
Erythræa . . 98, 117
Euonymus . 99, 119
Eupatorium 285, 299
Euphorbia . 323, 325
Euphrasia . 225, 239
Exacum . . 84, 90

Fagus . . 325, 343
Fedia . . 48, 50
Festuca . . 50, 74
Ficaria . . 211, 220
Fragaria . 198, 206
Frankenia . 148, 161
Fraxinus . 38, 39
Fritillaria . 149, 152
Fumaria . . 266, 267

Galanthus . 149, 150
Galeobdolon 225, 232
Galeopsis . 225, 231
Galium . . 84, 87
Genista . . 266, 269
Gentiana . 99, 126
Geranium . 261, 263
Geum . . 198, 208
Glaucium . 210, 212
Glaux . . 99, 121
Glechoma . 224, 230
Glyceria . 49, 69
Gnaphalium 285, 302
Goodyera . 315, 319

Hedera . . 99, 121
Hedysarum 267, 276
Helleborus . 211, 223
Heracleum . 100, 142
Herminium . 315, 318
Herniaria . 99, 122
Hesperis . 247, 258
Hieracium . 284, 290
Hierochloe . 49, 68
Hippocrepis 267, 275
Hippophaë . 346, 358
Hippuris . . 35, 36
Holcus . . 49, 67
Holosteum . 50, 83
Hordeum . . 50, 81
Hottonia . 98, 108
Humulus . 346, 358
Hutchinsia . 246, 249
Hyacinthus . 149, 154
Hydrocharis 347, 361
Hydrocotyle 101, 127
Hymenophyllum . . 365, 371
Hyoscyamus . 98, 116
Hypericum . 281, 282
Hypochæris 284, 293

Iberis . . 287, 251
Ilex . . . 85, 94
Illecebrum . 99, 121
Impatiens . 99, 114
Imperatoria 101, 137
Inula . . 285, 308
Iris . . . 48, 53
Ismardia . . 85, 92

Jasione . . 99, 113
Juncus . . 149, 156
Juniperus . 347, 361

Knappia . . 48, 61
Kobresia . 323, 336

Lactuca . 284, 288
Lagurus . . 49, 78
Lamium . 225, 230
Lapsana . 284, 294
Lathræa . 225, 240
Lathyrus . 267, 272
Lavatera . 262, 266
Lemna . . 39, 46
Leontodon 284, 289
Leonurus . 224, 234
Lepidium . 247, 250
Leucojum . 149, 150
Ligusticum . 100, 138
Ligustrum . . 38, 39
Limosella . 225, 245
Linnæa . . 226, 244
Linum . . 102, 146
Listera . . 315, 320
Lithospermum 97, 105
Littorella . 324, 337
Lobelia . . 99, 113
Lolium . . 50, 79
Lonicera . 99, 118
Lotus . . 267, 280
Luzula . . 149, 159
Lychnis . 176, 191
Lycopodium 365, 372
Lycopsis . 98, 105
Lycopus . . 39, 45
Lysimachia . 98, 109
Lythrum . 194, 195

Malaxis . 315, 321
Malva . . 262, 265
Marrubium 225, 234
Matricaria . 286, 311

Matthiola . 247, 257
Medicago . 267, 281
Melampyrum 225, 239
Melica . . 49, 67
Melittis . 225, 236
Mentha . 224, 226
Menyanthes 98, 108
Menziesia . 166, 170
Mercurialis 347, 360
Mespilus . 197, 199
Meum . . 100, 139
Milium . . 49, 62
Moenchia . . 85, 96
Monotropa 175, 176
Montia . . 50, 83
Myosotis . . 98, 102
Myosurus . 102, 148
Myrica . . 346, 358
Myriophyllum 324, 341
Myrrhis . 101, 130

Narcissus 149, 150
Nardus . . 48, 58
Narthecium 149, 154
Nasturtium 247, 256
Neottia . 315, 319
Nepeta . . 225, 226
Nuphar . 210, 214
Nymphæa . 210, 214

Œnanthe . 100, 135
Œnothera . 166, 167
Ononis . . 266, 270
Onopordum 284, 298
Ophioglossum, 365, 372
Ophrys . . 315, 318
Orchis . . 314, 315
Origanum . 225, 235
Ornithogalum 149, 152
Ornithopus 267, 275
Orobanche 226, 245
Orobus . . 267, 271
Osmunda . 365, 372
Oxalis . . 176, 191
Oxyria . . 149, 161

Pæonia . . 210, 217
Panicum . 49, 64
Papaver . 210, 212
Parietaria . 84, 92
Paris. . . 167, 174
Parnassia . 102, 145
Pastinaca . 101, 142
Pedicularis . 226, 240
Peplis . . 148, 161
Peucedanum 100, 141
Phalaris . . 48, 58
Phleum . . 48, 59
Phyteuma . 99, 112
Picris . . 284, 287
Pimpinella . 101, 140
Pinguicula . 39, 44
Pinus . . 325, 345
Pisum . . 267, 271
Plantago . 84, 90
Poa . . . 49, 70
Polemonium 98, 111
Polycarpon . 50, 84
Polygala . 266, 268
Polygonum 167, 172
Polypodium 364, 365
Polypogon . 49, 61
Populus . 346, 359
Potamogeton 85, 94
Potentilla . 198, 206
Poterium . 324, 342
Prenanthes 284, 288
Primula . 98, 107
Prunella . 225, 237
Prunus . . 197, 198
Pteris . . 365, 370
Pulmonaria 97, 105
Pyrethrum . 285, 310
Pyrola . . 175, 177
Pyrus . . 197, 199

Quercus . 325, 342

Radiola . 85, 97
Ranunculus 211, 221
Raphanus . 247, 261
Reseda . . 195, 196
Rhamnus . 99, 119
Rhinanthus 225, 238
Rhodiola . 346, 360
Rhynchospora, 48, 54
Ribes . . 99, 120
Rosa . . 197, 201
Rottbollia . 50, 80
Rubia . . 84, 89
Rubus . . 197, 204
Rumex . . 149, 162
Ruppia . . 85, 95
Ruscus . . . 346

Sagina . . 85, 96
Sagittaria . 324, 341
Salicornia . . . 85
Salix . . 345, 347
Salsola . . 99, 125
Salvia . . 39, 46
Sambucus . 102, 144
Samolus . 98, 118
Sanguisorba 85, 91
Sanicula . 100, 128
Saponaria . 176, 183
Saxifraga . 175, 179
Scabiosa . 84, 86
Scandix . 101, 130
Scheuchzeria, 149, 164
Schœnus . 48, 53
Scilla . . 149, 153
Scirpus . . 48, 54
Scleranthus 175, 182
Scolopendrium 365, 370
Scrophularia 226, 242
Scutellaria . 225, 237
Sedum . . 176, 189
Selinum . . 100, 141
Sempervivum 195, 197
Senebiera . 246, 252
Senecio . . 286, 305
Serratula . 284, 295
Sesleria . 49, 68
Sherardia . 84, 86
Sibbaldia . 102, 147
Sibthorpia . 226, 244
Silene . . 176, 184
Sinapis . . 247, 260
Sison . . 100, 133
Sisymbrium 247, 256
Sium . . 100, 132
Smyrnium . 101, 136
Solanum . 98, 117
Solidago . 286, 307
Sonchus . 284, 287
Sparganium 323, 328
Spartina . 49, 73
Spergula . 176, 194
Spiræa . . 197, 200
Stachys . . 225, 233
Staphylea . 102, 144
Statice . . 102, 146
Stellaria . 176, 186
Stipa . . 49, 77
Stratiotes . 211, 218
Subularia . 246, 247
Symphytum 97, 105

Tamarix . 104, 144
Taxus . . 346, 359

Taxus . . 347, 362
Teesdalia . 247, 251
Tenacetum . 285, 301
Teucrium . 225, 226
Tilia . . . 210, 215
Thalictrum . 211, 219
Thesium . 99, 122
Thlaspi . . 247, 250
Thymus . 225, 235
Tillæa . . 85, 97
Tofieldia . 150, 163
Tordylium . 100, 143
Torilis . . 101, 129
Tormentilla 198, 208
Tragopogon 284, 286
Trichomanes 365, 371
Trichonema . 48, 52
Trientalis . 166
Trifolium . 267, 277
Triglochin . 149, 164
Triodia . . 50, 72
Triticum . 50, 82
Trollius . 211, 223
Turritis . . 247, 255
Tussilago . 286, 305
Tulipa . . 149, 152
Typha . . 323, 328
Ulex . . 266, 270
Ulmus . . 100, 125
Urtica . . 334, 338
Utricularia . 39, 54
Vaccinium . 166, 169
Valeriana . 48, 50
Vella . . 246, 248
Verbascum . 98, 114
Verbena . 225, 226
Veronica . 38, 40
Viburnum . 102, 143
Vicia . . 267, 273
Vinca . . 98, 122
Viola . . 99, 114
Viscum . . 346, 357
Woodsia . 364, 366
Xanthium . 324, 339
Zannichellia 323, 327
Zostera . . 35, 36

INDEX TO THE ENGLISH NAMES.

Abele . . . 359
Adder's-tongue . 372
Adonis . . . 220
Agrimony . . 196
Alder 337
Alder Buckthorn 119
Ale-hoof . . . 230
Alexanders . . 136
Alkanet . . . 104
All-seed . . 84, 97
Alyssum . . . 249
Amaranth . . . 340
Andromeda . . 117
Angelica . . . 138
Apple-tree . . 200
Archangel. 230, 231
Arrow-head . . 341
Arrow-grass . . 164
Asarabacca . . 195
Ash 40
Asphodel . 154, 163
Asparagus . . 155
Avens 209
Awlwort . . . 248
Azalea 110

Bald-money . . 139
Bane-berry . . 211
Barberry . . . 160
Barley 81
Barren-wort . . 91
Bartsia . . . 238
Base Rocket . . 196
Basil 235
Bastard-balm 236, 237
Bastard Toad-flax 122
Beak-rush . . 54
Beaked-parsley. 130
Bear-berry . . 177
Beard-grass . . 61
Bed-straw. . 87, 88
Bee-orchis . . 318
Beech 343
Beet 125
Bell-flower . . 111
Bennet. . . . 81
Bent-grass . *62, 63*
Betony. . . . 233
Bilberry . . . 169
Bindweed. . . 110
Birch . . 343, 344
Bird-cherry . . 198
Bird's-nest . . 176
Bird's-foot . . 275
Bird's-foot Trefoil 280
Birthwort . . . 323
Bistort. . . . 172
Bitter-sweet . . 117
Bitter-vetch . . 272
Black Bryony . 359
Bladder-fern . . 368
Bladderwort . . 45
Bladder-nut . . 144
Black-thorn . . 198
Blaeberry . . . 169
Blue-bottle . . 314
Bog-bean . . . 108
Bog Asphodel . 154
Bog-rush . . . 53
Bog-orchis . . 321
Borage. . . . 105
Box-tree . . . 328
Brake 371
Bramble . . . 204
Branks. . . . 173
Bristle-fern . . 371
Brookweed . . 118
Brooklime. . . 42
Broom 269
Broom-rape 245, 246
Brome-grass . . 76
Bryony . 340, 359
Buck's-horn Plantain . . . 91
Buckthorn 119, 358
Buckwheat . . 173
Bugle 226
Bugloss . 104, 106
Bullace-tree . . 198
Burdock . . . 295
Bur-marigold. . 299
Burnet. . . . 91
Burnet-saxifrage 140
Bur-reed . . . 329
Bur-parsley . . 129
Burweed . . . 339
Butcher's-broom 357
Butterwort . . 44

Cabbage . . . 260
Calamint . . . 236
Cammock . . . 270
Campion 192, 184, 185
Canary-grass . . 59
Candy-tuft . . 251
Caraway . . . 139
Cardamine . . 254
Carex . . 329, 336
Carline-thistle . 299
Carrot 132
Cat-mint . . . 228
Catch-fly . 184, 185
Catch-weed . . 106
Cat's-ear . . . 294
Cat's-tail . . . 328
Cat's-tail-grass . 59
Centaury . . . 118
Celandine . . . 212
Chaffweed . . 91
Chamomile . . 312
Charlock . . . 261
Cherleria . . . 189
Cherry 198
Chervil. . . . 131
Chesnut . . . 343
Chickweed . . 186
Chickweed Winter-green . . 166
Chickweed Toad-grass. . . . 93
Cicely 130
Cinquefoil. . . 206
Cistus . . 215, 216
Clary 46
Cleavers . . . 89
Clot-bur . . . 295
Club-moss. . . 373
Club-rush . 54, 55
Cock's-head . . 276
Cock's-foot-grass 73
Colchicum . . 164

Cole-seed . . . 259
Colt's-foot . . . 305
Columbine . . . 218
Comfrey . . . 105
Coral-root . . 322
Coral-wort . . 253
Cord-grass . . 73
Corn-cockle . . 191
Cornel 92
Cornish Money-wort 244
Corn-marigold . 310
Corn-salad . 51, 52
Cotton-grass . 57, 58
Cotton-thistle . 298
Cotton-weed . . 306
Cow-bane . . . 134
Cow-berry . . 170
Cow-chervil . . 131
Cow-parsley . . 131
Cow-parsnep . . 143
Cow-wheat . . 239
Crab-tree . . . 200
Cranberry . . . 170
Crane's-bill . . 263
Cress Rocket . 248
Crocus 52
Cross-wort . . 87
Crowberry . . 357
Crowfoot . 221, 222
Cuckoo-flower . 254
Cuckow-pint . . 341
Cudweed . 302, 303
Currant . . . 120
Cyclamen . . . 108
Cyperus . . . 54

Daffodil . . . 151
Daisy . . . 309
Dame's-violet . 259
Dandelion . . 289
Darnel 80
Deadly night-shade . . . 117
Dead-nettle 230, 231
Devil's-bit. . . 86
Dock . . 162, 163
Dodder . . . 126
Dog's-tail-grass . 73
Dog's-tooth-grass 63
Dog's-wheat . . 83
Dog-wood . . . 92
Dropwort . . . 201
*Duck*weed . 46, 47
Dutch-myrtle . 358
Dyer's-weed . . 196

Earth-nut . . . 132
Elder 144
Elecampane . . 308
Elm 125
Enchanter's night-shade . . . 40
English Galingale 54
Eryngo 127
Evening Primrose 167
Ever-green Alka-net 104
Eyebright . . . 239

Feather-grass . 78
Fennel 139
Fescue . . . 74, 75
Feverfew . 310, 311
Field-madder . 87
Figwort . . . 243
Filmy-fern 371, 372
Finger-grass . . 68
Fir 345
Flag 155
Flax 146
Fleabane . 304, 308
Fleawort . . . 309
Flixweed . . . 257
Flower-de-luce . 53
Flowering-rush . 175
Fly-orchis . . . 318
Fool's-parsley . 134
Forget-me-not . 102
Fox-glove . . . 243
Fox-tail-grass 60, 61
Fritillary . . . 152
Fumitory . 267, 268
Furze 270

Gale 358
Garlick . . 151, 152
Gentian . . 126, 127
Germander . . 227
Germander Speed-well 42
Gill 230
Gipsy-wort . . 46
Glass-wort . 35, 36
Globe-flower . . 223
Goat's-beard . . 286
Gold-of-pleasure 249
Golden-saxifrage 178
Golden-rod . . 307
Goldilocks . . 300
Good-Henry . . 128
Goodyera . . . 319
Gooseberry . . 121
Goose-foot 123, 124
Goose-grass 88, 89, 206
Goose-tongue . 318
Gorse 270
Gout-weed . . 137
Grass of Parnassus 145
Grass-wrack . . 36
Gray-mill . . . 103
Green-weed . . 269
Ground-ivy . . 230
Groundsel 305, 306
Greek-Valerian 111
Gromwell . . 103
Guelder-rose . 143

Hair-grass 64, 65
Hard-fern . . 370
Hart-wort . . 143
Hart's-tongue . 370
Hare's-ear 141, 258
Hare's-tail-grass 78
Hasel 344
Hawkbit . . . 290
Hawthorn . . 199
Hawk's-beard . 295
Hawk-weed . . 290
Heath 171
Heath-pea . . 272
Heath-grass . . 72
Hedge-mustard . 256
Hedge-parsley . 129
Hellebore . . 224
Helleborine 320, 321
Hemlock . 134, 135
Hemp-nettle . . 231
Hemp-agrimony 300
Henbane . . . 116
Herb-Bennet . 209
Herb-Christopher 211
Herb-Gerarde . 137
Herb-Paris . . 174
Hog-weed . . 143
Holy-grass . . 69
Holly 94
Hop 359
Honeysuckle . . 119
Horehound . . 234
Hornbeam . . 344

Horned-poppy . 212
Hornwort . . 340
Horse-radish . . 252
Horse-shoe-vetch 276
Horse-tail . . 374
Hound's-tongue 104
House-leek . . 197
Hutchinsia . . 249
Hyacinth . 149, 154

Iris 53
Ismardia . . . 92
Ivy 121

Jacob's-ladder . 111
Jagged-chickweed 83
Juniper . . . 362

Kale 260
Kidney-vetch . 271
Knappia . . . 61
Knapweed . . 313
Knawel . . . 182
Knot-grass 173, 121
Kobresia . . . 337

Ladies'-fingers . 271
Ladies'-slipper . 322
Ladies'-smock . 254
Lady's-mantle . 93
Lamb's-lettuce 51, 52
Larkspur . . . 217
Lavender-thrift . 146
Least-gentian . 90
Least-stitchwort . 96
Leopard's-bane . 309
Lettuce . . . 268
Lily-of-the-valley 155
Lime-tree . . . 215
Linden . . . 215
Linnæa . . . 244
Ling 170
Listera . . . 320
Live-long . . 189
Lobelia . . . 113
London-rocket . 257
Loose-strife . . 109
Lovage . . . 138
Lousewort . . 241
Lungwort . . . 105
Lychnis . . . 192
Lyme-grass . . 81

Madder . . . 90
Maiden-hair . . 371
Mallow . . . 265
Man-orchis . . 318
Maple 172
Mare's-tail . . 36
Marigold . . . 224
Marsh cinquefoil 210
Marsh-centaury . 90
Marsh-marigold 224
Marsh-mallow . 265
Marsh-penny . 128
Marsh-samphire . 35
Marsh-trefoil . . 108
Mat-grass . . 58
Meadow-rue 219, 220
Meadow-sweet . 201
Meadow-grass 70, 71
Medlar . . . 199
Medick . . . 281
Melick-grass . 68
Meu 139
Meadow-sage . 46
Melilot 277
Menziesia . . 170
Mercury . . . 361
Mercury - goose-foot 123
Mezereum . . 171
Milfoil . . . 313
Millet-grass . . 62
Milk-parsley . . 141
Milkwort 121, 269
Milk-vetch . . 276
Mint . . . 228, 229
Misseltoe . . . 358
Mithridate-mustard 250
Moenchia . . . 96
Money-wort 244, 109
Monk's-hood . . 218
Moon-flower . . 310
Moon-wort . . 372
Moor-grass . . 68
Moschatell . . 174
Motherwort . . 234
Mountain-ash . 200
Mountain-avens . 209
Mountain-sorrel . 162
Mouse-ear . . 83
Mouse-ear chick-weed . . . 192
Mouse-tail . . 148
Mudwort . . . 245
Mugwort . . . 302
Mullein . . . 116
Musk-thistle . . 296
Mustard . 260, 261
Myrtle-flag . . 155

Narcissus . . . 151
Navelwort . . 189
Navew 259
Needle-chervil . 130
Nettle 338
Nightshade . . 117
Nipplewort . . 294
Nonesuch . . . 281

Oak . . . 242, 243
Oat-grass . . . 79
One-berry . . . 174
Orache . . . 363
Orchis . . 315, 316
Orpinè 189
Osmund-royal . 372
Ox-eye 310
Ox-tongue . . 287

Panick-grass . . 64
Parsley-piert . . 93
Parsnep . . . 142
Pasque-flower . 219
Pear-tree . . . 199
Pearl-wort . . 96
Pellitory . . . 92
Penny-cress . . 250
Penny-royal . . 230
Pepper-saxifrage 141
Pepper-wort . . 250
Periwinkle . . 122
Persicaria . . . 173
Petty-whin . . 269
Pheasant's-eye . 220
Pilewort . . . 221
Pimpernel . . 109
Pink 183
Piony 217
Pipewort . . . 339
Plantain . . 90, 91
Plowman's Spikenard 304
Polypody . 365, 366
Pondweed . . 94
Poplar 359
Poppy 213
Prickly Sampire 128
Prickwood . . 195
Primrose . . . 197

Primrose-peerless 151
Print 39
Privet 39
Purslane . . . 161

Quaking-grass . 72
Quicken . . . 200

Radish. . . . 261
Ragged-robin . 192
Rampion . . . 113
Rampion Bell-flower . . . 111
Rape 259
Rasp-berry . . 204
Redshanks . . 97
Reed 66
Reed-mace . . 328
Rest-harrow . . 270
Ribwort . . . 90
Roan-tree. . . 200
Rose 201
Rosemary. . . 177
Rosewort . . . 360
Rupturewort . . 123
Rush. . . 156, 157
Rush-wheat . . 32
Rye-grass . . . 80

Sage 46
Saintfoin . . . 276
Salad Burnet. . 342
Sallow-thorn . . 358
Saltwort 35, 36, 121, 125
Sandwort 187, 188
Sanicle . . . 128
Saw-wort . . . 296
Saxifrage . 179—182
Sea Bugloss . . 104
Sea Chamomile . 311
Sea Gilliflower . 146
Sea-grass . . . 36
Sea-heath . . . 161
Sea Kale . . . 253
Sea Milkwort . 121
Sea-parsnep . . 128
Sea Radish . . 261
Sea-rocket . . 253
Sea Samphire . 136
Sea Stock . . : 257
Shepherd's-purse 251
Shepherd's-staff. 86
Shore-weed . . 337
Scabious . . . 86
Scheuchzeria . 164
Scorpion-grass . 102
Scurvy-grass . . 252
Self-heal . . . 237
Septfoil . . . 208
Service-tree . . 200
Sheep's-bit . . 113
Shepherd's-needle 130
Shield-fern . . 366
Sibbaldia . . . 147
Silver-weed 206, 207
Skull-cap . . . 237
Sloe-tree . . . 198
Snake's-head . 152
Snakeweed . . 172
Snap-dragon 241, 242
Sneezewort . . 312
Snowdrop . . . 150
Snowflake . . . 150
Soapwort . . . 183
Soft-grass . . . 67
Solomon's-seal . 155
Southernwood . 301
Sow-thistle . . 287
Spearwort. 87, 221
Speedwell . 41—44
Spider-orchis . . 319
Spiderwort . . 154
Spignel . . . 139
Spike-rush . 56, 57
Spindle-tree . . 120
Spiræa 201
Spleenwort . . 369
Spring-grass . . 47
Spurge . . . 326
Spurge-olive . . 171
Spurrey . . . 194
Squill 153
Squinancy-wort . 87
Squirrel-tail-grass 82
Star-thistle . . 314
Star-of-Bethlehem 153
Starwort . . . 307
Stitchwort. . . 186
St. Barnaby's thistle 314
St. John's-wort . 282
Stock 257
Stonewort. 37, 134
Stone-parsley 134, 140
Stone-crop . 189, 190
Stork's-bill . . 262
Strapwort. . . 145
Strawberry 206, 208
Succory . . . 295
Sundew . . . 147
Sulphur-wort. . 142
Sweet Cicely. . 130
Sweet-grass . 67, 70
Sweet-scented grass 47
Swine's-cress . . 252
Sycamore . . . 172

Tamarisk . . . 145
Tansy 301
Tare 275
Tassel-grass . . 96
Teasel 85
Teesdalia . . . 251
Thistle . . 226—298
Thorough-wax . 141
Thrift 146
Tillœa 97
Timothy-grass . 59
Toad-flax . . . 122
Toad-grass . . 93
Toothwort . . 240
Tormentil . . . 208
Tower-cress . . 255
Tower-mustard . 255
Traveller's-joy . 219
Treacle-mustard. 258
Tree-mallow . . 266
Trefoil . . 277—280
Trichonema . . 53
True-love . . . 174
Tulip 152
Turnip 559
Twayblade 318, 320
Twig-rush . . . 47

Valerian . . . 51
Venus'-comb . . 130
Vetch . . 273, 274
Vetchling . 272, 273
Viper's-bugloss . 106

Wake-robin . . 342
Wall-cress . . 255
Wall Lettuce . . 289
Wartwort . . . 326
Water-cress . . 256
Water-dropwort . 135
Water Featherfoil 108
Water Lily 108, 314
Water milfoil 45, 341
Water-plantain . 165

Water Soldier . 218
Water violet . . 108
Waterwort . . 174
Water Chickweed 83
Water pimpernel 118
Water Starwort . 38
Waterparsnep132, 133
Water Horehound 46
Water Elder . . 143
Water-hemlock 134
Water Horse-tail 37
Water Blinks . 83
Way Bennet . . 81
Way-faring Tree 143
Weasel-snout . 232
Wheat 82
Wheat-grass . . 82
Whin 270
Whitebeam . . 200
White-rot . . . 128
White-thorn . . 199
Whitlow-grass . 248
Whortle-berry 169, 170
Wild-celery . . 137
Wild Chamomile 311
Wild-oat . . . 78
Willow . . . 348
Willow-herb . . 168
Winter-cress 257, 258
Winter-green 166, 178
Woad 196
Wolf's-bane . . 218
Woodbine . . . 119
Woodruff . . . 87
Wood-rush . . 159
Wood-sage . . 227
Woodsia . . . 366
Wood-sorrel . . 191
Wood-waxen . . 269
Woody Night-shade . . . 117
Wormwood 301, 302
Woundwort . . 233
Wych Elm . . 126
Yarrow . . . 313
Yellow-cress . . 256
Yellow Rattle . 239
Yellow-rocket . 257
Yellow-weed . . 196
Yew 362

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